RAILROAD

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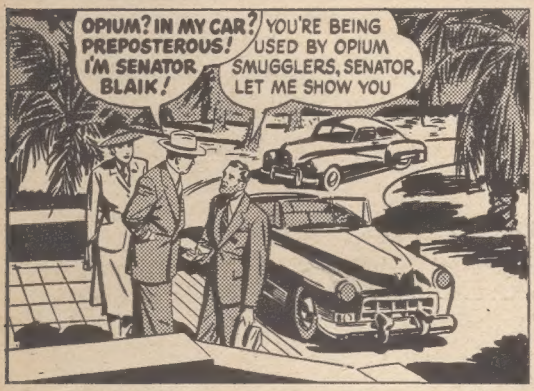

AMAZING! YOU SAY THEY PUT IT IN THE TIRE AT THAT PARKING LOT?
EXACTLY! AND TONIGHT THE GANG AT THIS END WILL TRY TO NAB IT. MAY I USE YOUR 'PHONE?

THAT'S THAT. WELL, YOU FOLKS HAVE YOUR DINNER. I'LL BE BACK ABOUT NIGHTFALL
WHY NOT STAY AND HAVE A SNACK WITH US?
SURE. COME UPSTAIRS AND FRESHEN UP

THIS BLADE SURE MAKES SHORT WORK OF WHISKERS. MY FACE FEELS GREAT!
I'M SOLD ON THIN GILLETTES. THEY'RE PLENTY KEEN AND LONG-LASTING

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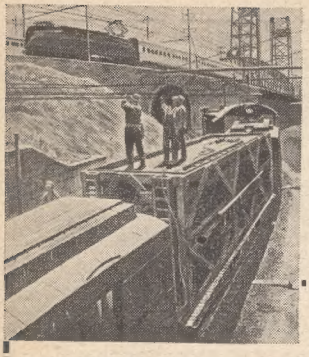

RAILROAD

MAGAZINE

Originally Railroad Man's Magazine, founded 1906

November, 1952 Vol. 59, No. 2 35 Cents

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By: *Herb Mott*

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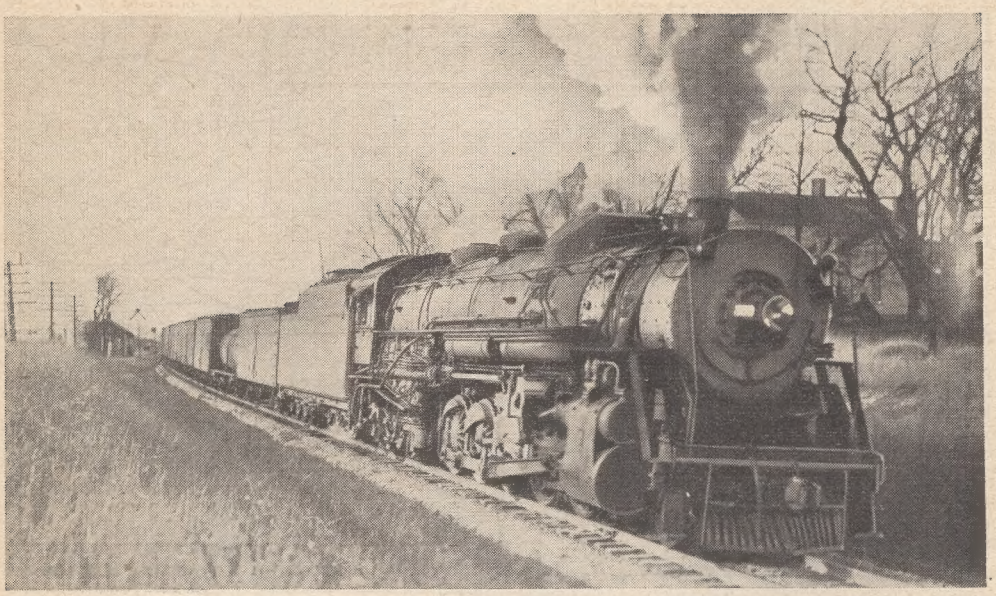

PAN INTO IT. One of the secrets of effective rail movie-making is to swing camera toward a train that's coming at you, instead of waiting till it passes your lens. Builds up audience anticipation

RAILROAD CAMERA CLUB

Railfan Movies

TED GAY

THERE MAY not be many of us railroad movie bugs but for the benefit of those who like to take movies of railroads (and for those who like to look at 'em), it might be of interest to set forth some ideas on the subject. No attempt is made here to go into technicalities such as exposures, type of film, frames per second, etc. The movie camera should be used to take full advantage of what it can do in the way of capturing railroad atmosphere which is often so difficult to do with the still camera, even when successful. You can corral all the activities of railroading and place them for presentation in connected sequences, by means of the movie camera.

A healthy pocketbook permits a more complete picture, perhaps, but titles and your own ingenuity can save footage or put it to the best advantages. However, it is important that the scenes are not too short and, in this connection, when near the end of a reel (say, four feet or less), the remaining film should be used for certain purposes and not for regular and active scenes. Those last few feet can be used best for station or tower signs (to be spliced into proper position later) or for a station or right-of-way shot that need not be very long and used for identification purposes by placing it ahead of a train approaching, passing or leaving such location. To make it more interesting, the train view at the same location can be shot from another angle. These end-of-the-reel bits can help make the film entertaining and diversified.

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— Stanley Nawrocki

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— Joseph Rosenberg

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—Paul Frank Seier

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Diversification is perhaps the most important phase of your presentation and should be enlarged upon as much as possible; there seems to be no limit to what one can think of when it comes to rail movies. That is where much of the fun is found—not only because of the results, but in the planning and observations you make. Of course, different trains will be photographed but that is only the beginning. They should be taken from different angles, locations and even different speeds. Even diesels might be worth looking at(?) if color film is used—but only then and not too many at that. If steam, the same train can be taken on separate days at various locations such as leaving terminals and other stations, on a grade, over bridges, into or out of tunnels, on a straightaway, onto a siding, pulling into a yard or terminal—you can build up from there. Taking fuel, sand or water may not be new but it does add to the picture (with a filter and against the sun, mebbe?) The natural closing scene is a shot of the train entering its terminal. These bits can be assembled over a period of time and with the enjoyable planning, grow in interest as they are put together.

Another advantage of the movie camera is that a shot of a train "going away" is almost as interesting as the conventional ¾ view, especially if the consist is unusual. It also means that you can take the shot rather than pass it up as would be the case with the "snap" since such photos are not very popular. The nightmare of the "still" boys is lack of space or obstructions. Again the movie operator is not particularly handicapped, in fact, it often works out to an advantage as it creates a different view and sets up a third dimension.

Panning can make or break a rail movie reel and requires more technique (though not technical mechanically) than most movie shooting. It is taboo in some quarters, but if used judiciously, can really do things for a reel. It should be done slowly and steadily (tripod best), keeping the subject in the same position in the finder to the full extent desired. An acceleration to a fast pan is permissible if the subject is kept centered in the finder. An occasional rapid pan, without a particular subject, to show a shift in scene is all right but one or two to a 200-foot reel (8mm) is enough.

THRILLING SHOT can be obtained by getting railway sign or signal in viewer, then panning into smoke plume of approaching locomotive, finally into engine itself. By the way, it isn't necessary to photograph *all* the cars of a freight—a good sampling will do. But don't forget the hack

HER HIGHNESS
JOAN THE WAD
JOAN'S COTTAGE,
2, Lanivet, Bodmin, Cornwall, England
ALWAYS UPON YOU DAME FORTUNE WILL NOD, IF YOU ALWAYS CARRY YOUR WEE JOAN THE WAD

AS HEALER. One Lady writes: "My sister suffered very badly for years, but since I gave her a Joan the Wad to keep near her she is much easier. Do you think this is due to Joan or the water from the Lucky Well?"

AS LUCK BRINGER. Another writes: "Since the war my wife and I have been dogged by persistent ill-luck and we seemed to be sinking lower and lower. One day someone sent us a Joan the Wad. We have never found out who it was, but, coincidence if you like, within a week I got a much better job and my wife had some money left her. Since then we have never looked back and, needless to say, swear by 'Queen Joan'."

DO YOU BELIEVE IN LUCK ?

AS MATCHMAKER. A young girl wrote and informed me that she had had scores of boy friends, but it was not until she had visited Cornwall and taken Joan back with her that she met the boy of her dreams, and as they got better acquainted she discovered he also has "Joan the Wad."

AS PRIZEWINNER. A young man wrote us only last week: "For two years I entered competitions without luck, but since getting Joan the Wad I have frequently been successful although I have not won a big prize. But I know that . . . who won $5,600 in a competition has one because I gave it to him. When he won his $5,600 he gave me $280 for myself, so you see I have cause to bless 'Queen Joan'."

HURRY

Mrs. WILSON, of Falmouth, says, 1951:
Since receiving Joan the Wad . . . my husband's health has improved 100%.

Mr. Jones of Cheltenham, says, 1951:
Send me J. O'Lantern. Since receiving Joan the Wad have won two 1st prizes in Crosswords . . . *John Bull* and *Sunday Chronicle.*

SEND NOW

JOAN THE WAD

is Queen of the Lucky Cornish Piskeys. Thousands of persons all over the world claim that she has brought them Wonderful Luck in the way of Health, Wealth and Happiness.

AS SPECULATOR. A man writes: "I had some shares that for several years I couldn't give away. They were 14 cent shares and all of a sudden they went up in the market to $1.10. I happened to be staring at Joan the Wad. Pure imagination, you may say, but I thought I saw her wink approvingly. I sold out, reinvested the money at greater profit and have prospered ever since."

Just send Two Dollar notes or an International Money Order and a large self-addressed envelope to:

JOAN'S COTTAGE, 2, LANIVET, BODMIN, CORNWALL, ENG.

and I will send you both History and Mascot.

Yes, panning can add to a story, showing length, number of tracks or signals, height of bridge or for any number of subjects where size or relationship is worth attention. When a train comes up close enough to the camera, a steady pan with the front end, or the stack, the drivers, or the cab (with name or number showing) and with a continuation of the train going away is one of the best of shots, especially if it is of a short train, in a limited area or a fast moving job. Doing the same thing with the rear end is just as effective. (Oh, for those old observation cars!) Seldom should you pan with the moving object and then reverse the direction of the pan.

Another purpose of panning cuts down the costs considerably. If you have the aforesaid healthy pocketbook and can use film to "keep on" a slow moving train, well and good, particularly if you start shooting when said train is some distance away, but it is necessary to keep winding the camera and, of course, it has to be on a tripod. Such shots aren't necessary as a rule and there are two ways to avoid them and probably make for better scenes —and both should be used for further variety. Never let a subject (train or certain other railroad structures) appear suddenly on the screen. Start with the track or sky or a signal, crossing watchman, etc. and pan into the train when it is within the distance that it can be identified. A pan from the sky or a signal, then into the smoke and slowly down to the train is always good. The other way is to start shooting when the train is still far away, stop after a few feet have been run on the film, rewind and resume when it gets where you want it. This is not as good as panning into the train but it isn't bad either. Just as you should never start with a train appearing abruptly on the screen, so an engine should never be shut off the same way. Let the engine go by, at least, or have it move away and out of the picture. If you have a long freight to contend with, let the engine move out of the finder and a few freight cars as well. Rewind and start shooting again when some unusual rolling stock approaches. A final rewind should be just before the caboose comes too close. A pan with the caboose is like egg in your beer. This procedure usually isn't necessary with passenger trains unless they are very long or moving too slowly.

Recently, in shooting a Lackawanna MU train, it was necessary to move with the train so that the scene would not be too short (it had come out of a cut into a curve near Denville) and it seemed natural to pan with that part of the train which identified it most. As the first car passed, I moved up to a pantograph and kept it in the find until I could move down slowly and get the whole train in again as it moved away. Simple, but it set up a nice picture.

I made some disparaging remarks about diesels somewhere back, but they do serve a photographic purpose—but not in still photos unless the train is just an incidental item. (Them's my sentiments.) It has been my good fortune to get some wonderful reels taken from their cabs. Such footage can be interspersed with shots from the right-of-way or an entire reel (or reels) can attempt to cover a run. My Ontario & Western reels taken from the cab of a diesel out of Weehawken, along the West Shore tracks through New Jersey and up the Hudson River, the Bear Mountain bridge, West Point, the crossover from West Shore tracks to NYO&W tracks at Cornwall into the Catskills with a layover at Middletown, is priceless to me.

My collection now amounts to thirty-four tins in both color and black-and-white which would be equal to about 27,600 feet if it was compared to 35mm professional size. In addition, it seems that about one-fourth again found its way into the wastebasket, especially when using war-time stuff (ouch!).

If you've read this far, you probably know more about photography than your writer (those who quit probably know more too), but I'd be pleased to learn of your ideas to add to my rather elementary ones.

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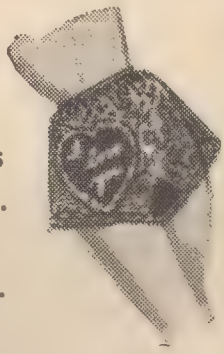

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Opening A Newsstand?

R. AUGUSTUS MAYBROOKE

THE SELF-EMPLOYMENT tax law is a boon to railroad workers who also engage in a part-time business. Other railroad workers may enjoy the windfall if they start a profitable part-time venture.

While the new self-employment tax is called an additional income tax, it is something more. It is a contribution to the Social Security Administration. It is a purchase of old-age insurance. It buys a monthly retirement check payable to the retired self-employed individual after he becomes 65. It also buys certain benefits that will be enjoyed by the self-employed person's family in the event of his death.

These benefits under the Social Security program are in addition to payments made to railroad workers under the Railroad Retirement Fund.

It is a matter of common knowledge that many railroad workers have been forced to earn more money to meet inflated expenses. Station agents are operating newsstands or candy stands, or both. Platform and baggage men are operating privately owned cabs and trar fer trucks. Others are pursuing hobbies as paying businesses. Still others are selling goods and services on a strict commission basis.

Prior to January 1, 1951, railroad workers were excluded from the Social Security program. This is still so. The reason being that railroad workers have their own retirement system.

As of December 31, 1950, every individual deriving earnings from self-employment is included in the old-age insurance program. In this way railroad workers, operating part-time businesses (other than farming) in addition to their railroad jobs, are eligible for old-age insurance benefits.

A self-employed individual pays a tax equal to one and one-half the tax imposed on an ordinary employe. The higher rate is necessary. A self-employed person finances his own old-age insurance benefits. He has no employer to help him. The rate of tax for 1951, 1952 and 1953 is 2¼ percent. The rate for 1954 to 1959, inclusive, will be 3 percent. The rate of tax will be increased in succeeding years until the maximum tax in 1970 and subsequent years will be 4⅞ percent.

The self-employment tax is measured by the individual's self-employment earnings received during his taxable year. No tax is imposed in a year in which self-employment earnings are less than $400. No tax is imposed on self-employment earnings over $3600. At the present rate of tax (2¼ percent) the lowest annual self-employment tax is $9; the highest annual tax is $81.

Taxable net earnings do not include all income that may be received by the self-employed person. Certain items of income are excluded, such as dividends, interest on non-business loans, interest on corporate and government bonds, or both, real estate rentals, and farm receipts.

Each self-employed individual must obtain a Social Security Account Number unless he already has one. Application for such a number must be made to the nearest Social Security field office.

Information concerning self-employment net earnings is reported in Schedule C of Form 1040 (the regular individual income tax return). The tax is computed in Schedule C and reported on Schedule C-a. The tax is paid to the Collector of Internal Revenue at the same time income tax is paid—March 15th of each year.

Insofar as the self-employed individual is concerned, old-age insurance benefits

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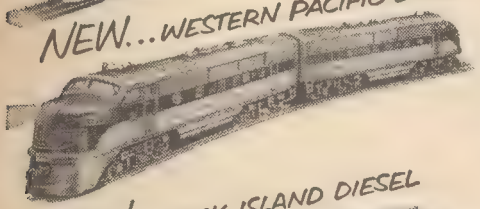

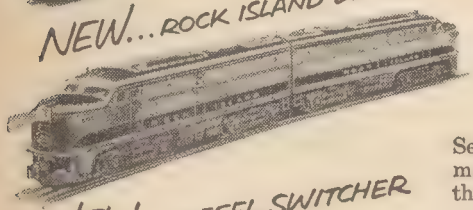

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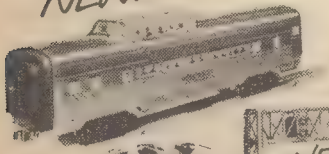

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are measured by the period of self-employment and the average monthly net earnings for that period. A retired self-employed person is entitled to monthly old-age insurance benefits if he is fully insured, is 65 years of age or over, and files an application for such benefits. The minimum requirements for a self-employed person to be "fully insured" are—calendar quarters of self-employment (during which his self-employment income was $100 or more) equal to one-half of the calendar quarters elapsed after 1950 and before age 65 or death (whichever occurs first). The absolute minimum of continuous self-employment is six calendar quarters of coverage (that is, one and one-half years) before a self-employed person becomes 65 years of age or dies. The maximum requirement is forty calendar quarters of coverage (that is, ten years, accrued at any time or at any age).

TO ILLUSTRATE the minimum requirement let us consider the case of Tom Jones. He is regularly employed as a passenger brakeman. He was 63 years of age on January 1, 1952. He converted a hobby into a profitable part-time business. For the calendar quarters beginning on July 1, 1952 and ending on December 31, 1953, his self-employment income will never be less than $100 for each of the six calendar quarters. (Average net earnings of $7.70 a week will meet the calendar quarter requirement of $100 or more.) He will be entitled to old-age insurance benefits on and after January 1, 1954, if he applies to the nearest field office of the Social Security Administration. The reason being that he will meet the statutory tests. This is so even though he was in business only a year and a half and had a total self-employment income of as little as $600 during that period. In this case the minimum amount payable to Tom Jones in the form of the Social Security old-age insurance benefit would be about $23 each month.

To illustrate the application of the law to a younger man, let us consider the case of Station Agent Jim Bowen. He was 50 years old on March 23, 1951. He operates a news and candy stand at his station. For the calendar quarters beginning on January 1, 1951, his self-employment income will never be less than $100 for any calendar quarter. He will be entitled to old-age insurance benefits when he retires. His family will be entitled to survivors' benefits, if Bowen should die before retirement. This is so even though he sold or discontinued his news and candy stand after June 30, 1958. The reason being that he will have calendar quarters of coverage equal to one-half of the calendar quarters between January 1, 1951, and March 23, 1966 (his 65th birthday). If Bowen continued the operation of the news and candy stand until he was 65, his monthly old-age insurance benefit checks would be in a larger amount. A higher average monthly self-employment income increases the base upon which payments are computed. The minimum amount payable to Jim Bowen on his retirement would be $25 monthly if he had self-employment income of $600 each year. The cost of such annuity would be $13.50 a year at the current tax rate. It will be slightly higher as the tax rate is increased. The maximum amount payable monthly to Jim Bowen would be $80 if he had an average annual self-employment income of $3600. The cost of such an annuity would be $81 a year at the current tax rate and slightly higher after 1953.

In conclusion, it must be said that the windfall given to railroad workers by the self-employment tax law may be lost by default. This will happen only when a part-time business is abandoned before one of the two statutory tests are met. The first test is—40 calendar quarters of self-employment at not less than $100 in any quarter and not less than $400 in any year. The second test is—not less than half of the calendar quarters of profitable self-employment between the time of starting the part-time business and the railroad workers 65th birthday or his death, whichever happens first. Ten years of profitable operation of a part-time business will establish Social Security benefits.

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PRIDE OF THE Northwest-
SP&S

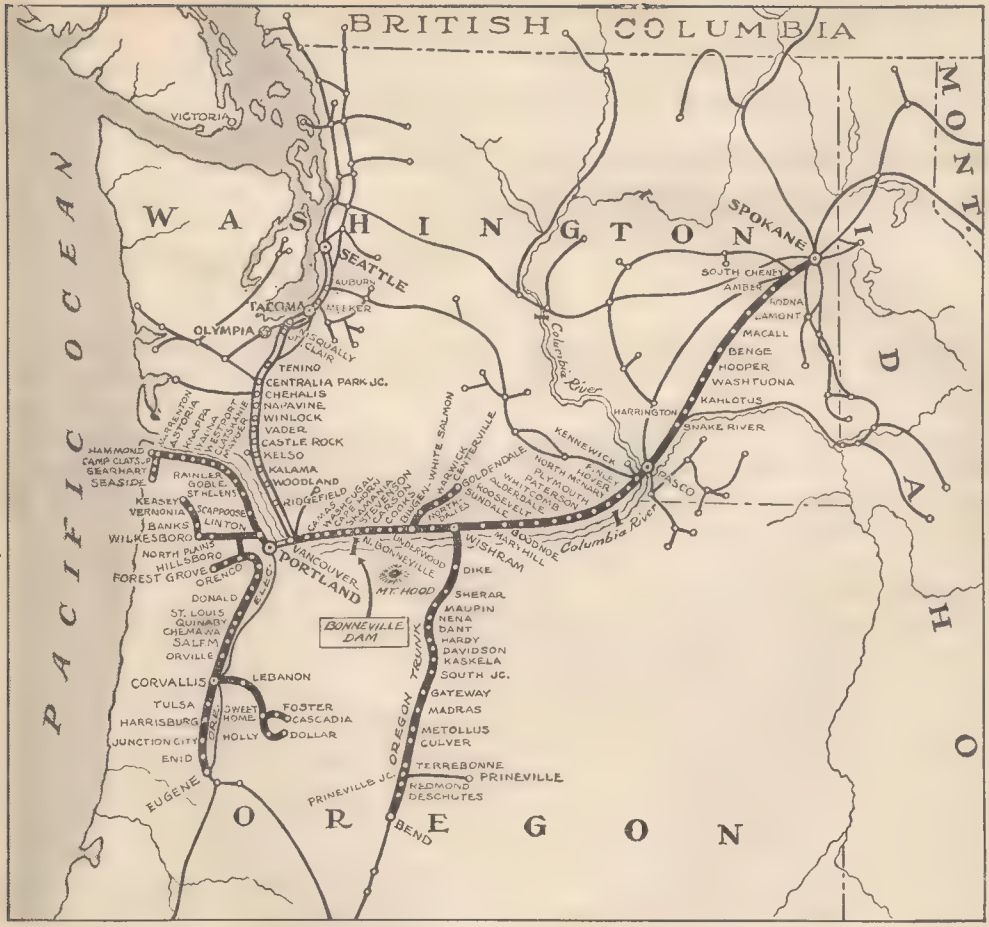
Wily Jim Hill Followed the Columbia River And Built One of the U.S.A.'s Best Roads, The Spokane, Portland & Seattle Railway

RICHARD L. NEUBERGER

RAIN IS FALLING in the railroad yard at Spokane, a driving rain which splashes on the car roofs and glistens on the gables of the tall spire of the Great Northern station. With the illuminated clock on the tower gleaming at 11:30 through the stormy darkness, the westbound *Empire Builder* arrives with a rush off the short truss bridge over the Spokane River. It is on time. The prow of the three-unit locomotive shines from the rainfall which challenged the train's swift pace across the Idaho Panhandle. Diesel switchers scurry through the yards, like marmots. They break the long orange train in two places to take off the Portland cars, first the coaches and then the sleepers. By 11:59 the *Empire Builder* is ready to resume the transcontinental journey to Seattle, still a rugged 330 miles from its final destination, where the schedule calls for the discharge of passengers by 8 o'clock the next morning. Even after the main *Empire Builder* has rumbled out of Spokane toward Seattle, switchers still are putting together the *Builder's* eight-car Portland consist. Although it does not roll westward until 12:06 a. m. it will be in Portland at 7:30, a full half-hour ahead of the main *Empire Builder's* arrival in Seattle. Yet the *Empire Builder* destined for Portland will have traveled 50 miles farther than its Seattle counterpart. Water-level river canyons and a magnificent roadbed combine to explain this transportation contrast. The route between Spokane and Portland constitutes the gentlest grades and lightest curvature of any rail line extending from the base of the Rocky Mountain uplift to the green valleys of the Pacific seaboard. It is the route of the railroad which forms the official entrance into Oregon for the Great Northern and Northern Pacific. This strategic railroad is known as the Spokane, Portland & Seattle.

Many famous systems enter the Pacific Northwest. Indeed, they include most of the great transcontinentals. Yet the fastest speed made by any train spanning this realm of lofty mountains and measureless uplands is attained not by one of the transcontinentals but by the SP&S—country cousin of the Great Northern and Northern Pacific Railways. The Union Pacific's *City of Portland* clicks off only 46 miles an hour after entering the zone where Pacific Time prevails; Southern Pacific's *Shasta Daylight* sways through scenic Oregon at a redoubtable 51 and the GN's main *Empire Builder* to Seattle does a slow 41 as it splices the State of Washington on its own trackage, but the Portland consignment hits better than 52 after it is coupled onto a single-unit, 2000-horsepower SP&S diesel.

"Gravity built this town," proclaimed the bearded James J. Hill of the Great Northern at the Lewis & Clark Centennial Exposition in Portland in 1905, when exactly a century had passed since the valiant explorers had followed the Columbia to the ocean. And gravity also built the SP&S, the gravity which draws a vast surge of glacial water downhill through lava and granite gorges to the sea. The *Empire Builder* bound for Seattle must conquer the stubborn divide of the Cascade Range on a 2.2 grade, but the Port-



George Mabie

land segment of the GN's crack train is taken by the SP&S through the Cascades in river chasms where the grade never exceeds an easy .4 per cent. Some railroaders in the Northwest refer to the SP&S as the billiard-table line because of its level profile. This revenue-producing subsidiary of the Great Northern and the Northern Pacific has never had the faintest semblance of a full-scale helper district, not even in the era when steam engines were lined up like dominoes in front of a string of cars. Jim Hill had prophesied such a route in 1906 when the rails of the SP&S were being laid along the north shore of the Columbia Gorge. "This line," said the frosty-haired Empire Builder, "will be the best new road ever built in the whole United States."

Whenever a basis for comparison with some other route is raised, Hill's prediction is abundantly sustained. The Northern Pacific has a local passenger train known as the *Alaskan,* which produces an SP&S offshoot at Pasco where the Columbia and Snake Rivers join. The SP&S coaches and express cars head down the Columbia to Portland while the *Alaskan* continues westbound across the state to Seattle. Although the difference in distance is only 18 miles more to Seattle, the SP&S offspring reaches Portland 2 hours and 10 minutes before the *Alaskan.*

Perhaps because its destiny is so inextricably tied to that of the Columbia River, the SP&S has figured in nearly all the momentous developments which have boomed the population of the Northwest a

lusty 40 per cent since the 1940 census. It hauled much of the steel and concrete for the Bonneville Dam spillway and even now it is bringing in huge quantities of material for the unfinished $235,000,000 McNary Dam on the Columbia. In fact, the reservoir soon to form behind McNary Dam has resulted in the relocation of 35 miles of SP&S right-of-way, producing even less curvature on the river route from Portland to Spokane. The sharpest curve along the 380 miles is only 3 degrees.

In addition, the SP&S at Pasco has served the first irrigated tracts to be watered by the pumps of the Columbia Basin Project, biggest reclamation undertaking of history. In this same arid region of sagebrush and tumbleweed, the SP&S has hauled construction materials for the sprawling Hanford Works, where plutonium for the atomic bomb goes through the final, mysterious processing. On top of these developments, the SP&S is the cargo railroad for the first light metal plant located west of the Missisippi—the Aluminium Company of America potline factory near Vancouver, Wash.

In the Columbia River and its tributaries lurks 42 percent of all the latent hydroelectric power inside the boundaries of the United States. For the first time this immense storehouse of energy is being tapped for industries and farms and homes. Because the SP&S clings to the Columbia like a lariat to a mustang "The Northwest's Own Railway" has figured in many events of regional destiny. From Pasco to Vancouver the SP&S main line follows the Columbia. This measures 222 miles, much of it in long tangents. No other railroad in the states of the Far West hugs one waterway for such a distance. The rich and wide domain of the Columbia has enjoyed a tremendous expansion during the past decade, and so has the only railroad which lies wholly within its borders. In 1941 operating revenues of the SP&S totaled $13.289,-042. By 1950 this income had more than doubled, to $26,738,515. Passenger receipts, for example, had soared from $398.615 to $963,756. Still larger proportionate increases had occurred in mail revenues, thus indicating the great gain in population for the communities served by the system.

The SP&S, with 3500 employes and 1185 miles of track, is at the top of the Northwest's *non*-transcontinentals. This mileage is divided fairly evenly between the two dominant states of the valley of

Continued on page 22

TRACKAGE and ROADBED are pride and joy of Edward B. Stanton, SP&S boss who comes by his preoccupation naturally, arriving as engineer in charge of maintenance-of-way ten years ago. He coined the SP&S slogan: "The Northwest's Own Railway"

Maurine Neuberger, Portland, Ore. wife of the author

GATEWAY. All northern lines enter Portland via the double-tracked interstate bridge across the Columbia River from Vancouver, Wash., *above*. SP&S owns two-thirds of the span, Northern Pacific one-third

BATTLEGROUND. Early in the century SP&S won exclusive construction rights along north shore of Columbia River after bitter battle with Harriman interests across the waterway from the sheer rock battlement of Cape Horn

the Columbia—632 miles in Oregon, 553 in Washington. A larger proportion of track is fitted with 112-pound rail than any other weight—37 percent, to be exact. Twenty percent of the right-of-way has 90-pound rail and 18 percent uses 115-pound lengths.

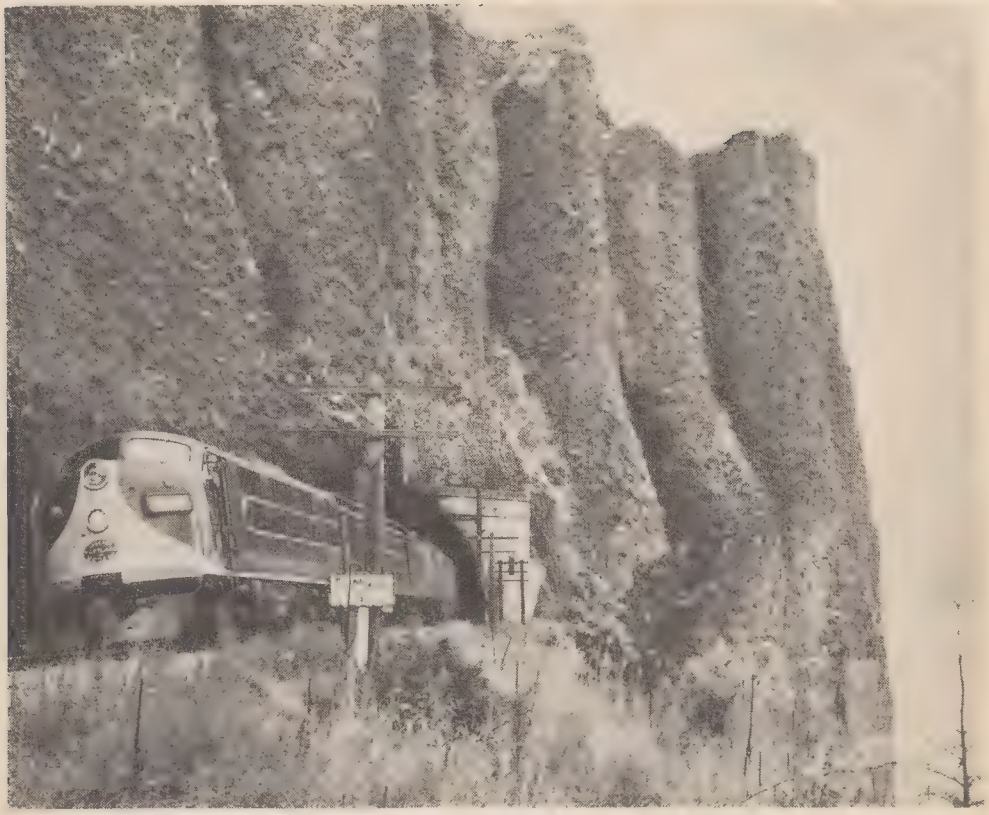
The bulk of the heavier rail, added during tht past few years, stems largely from the influence of Edward B. Stanton, the 48-year-old vice-president and general manager of the SP&S. He is the line's regional boss, serving under the presidents of the Northern Pacific and Great Northern. If he allows himself the luxury of any phobia, it can be put in the general category of roadbed and trackage. Stanton comes by this obsession naturally. He arrived at the SP&S from the NP in 1943 as engineer in charge of maintenance-of-way. In 1947 he succeeded to the big desk in the front office, and just went on straightening out curvatures and deepening the rock cushion beneath the ties.

In 1950 the SP&S' net income of $5,143,210 represented a bonanza increase in profits of 69 percent over the previous year. The general manager attributed this to dieselization. No steam locomotives have been ordered in recent years. The SP&S uses 42 oil-burning steamers, but only until they wear out beyond ready repair. By contrast, the locomotive roster today includes 66 diesel engines with more on order. They are of Alco and Electro-Motive Division manufacture.

WHEN the Northern Pacific has a particularly heavy freight, it routes the train between Spokane and Pasco, not over NP trackage but on that of the SP&S. Coal chutes along this 146 miles of the

FREIGHT NOW. Waning revenues caused the last passenger train on the 118-mile run between Portland and Seaside to be taken off last January. One of the final consists rumbles along the main stem of Rainier, Ore.

Carl E. Vermilya, The Portland Oregonian



WHERE THE SP&S WAS NEARLY STOPPED, the western end of the Cape Horn tunnel. Harriman crews tried to block construction gangs from the huge lava promontory which commands the northern shore of the Columbia. SP&S finally won their battle in the courts

SP&S are a continuation of running rights vested in the Northern Pacific, because the SP&S operates no coal-burners of its own. A lot of NP tonnage has been diverted to the easier route of the country cousin in recent years, for the Pasco area has boomed more prodigiously than any other in the Northwest. The population is up a fabulous 161 percent since 1940.

Although the SP&S may be a mere rural relative of the NP and GN, it is very much on its own in autonomy of operation. When through passenger tickets are sold from Portland to points east of Spokane on the parent systems, the SP&S retains its pro-rated share of the fares. The same division applies to freight. If revision of Northern Pacific or Great Northern schedules forces time-card changes on the SP&S, the offending parent line must pay the SP&S for the printing costs involved. The SP&S does not ask St. Paul for permission when it speeds up a train time free of NP or GN connections. The Northern Pacific and Great Northern each owns $45,798,500 worth of SP&S stocks and bonds. In 1950 the SP&S paid NP and GN $2,000,000 each for interest on its bonded indebtedness, twice the sum turned over to the parent companies during 1949.

A substantial segment of SP&S prosperity originates from the changes that have occurred in the basic economy of the Pacific Northwest. Once the region had to buy more than it sold. Low-cost power for manufacturing and processing is tending to alter this. In 1950 the SP&S shipped 60 percent of its payload east-

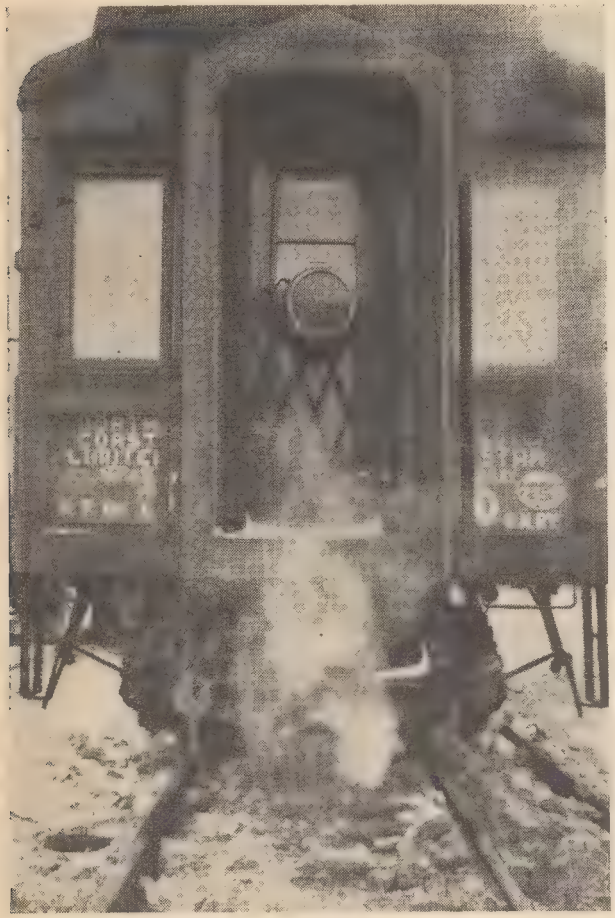
Continued on page 26

LARGEST AND HIGHEST. All trains stop at Wishram, Wash. site of the railway's biggest yards. In the distance is Mount Hood, highest peak in Oregon. Truss bridge takes freights to Oregon Trunk Railway trackage

ALCO PAIR. Just east of the Wishram yards along the Columbia River water-level grade, a 109-car freight calls for a simple-articulated 4-6-6-4 (No. 911) and a *Mikado* (No. 538) to work in tandem

bound, reversing the trend. Such items as aluminum ingots are beginning to appear among the cargo consigned to the Eastern states. Yet forest products still dominate the railroad's tonnage—41 percent. Agricultural produce ranks next, with 18 percent. Wheat from the Washington uplands prevails over other separate farm products.

Few railroads are more conscious of close affinity with a region than the SP&S. All its trackage lies within the Northwest. It has no competing affections. Buffet cars are named after the lordly glacial peaks of the region—*Hood, St. Helens, Jefferson, Adams.* The mountains themselves can be seen from the rolling stock which bears their names. The SP&S wanted to call a car *Columbia* in honor of the river that provides a swift conduit through the Cascades, but discovered that the Southern Railway, among others, had prior rights to this nomenclature. However, it was learned later that the river was not involved, only the state capital of South Carolina. Chinook salmon, which lurk in the cold reaches of the Columbia, dominate SP&S diners. Chefs serve up the flaky pink fish baked, broiled, planked, fried and en casserole.



Maurine Neuberger

NO SECRET. Steam from station pipes at Spokane cannot hide the fact that club car of SP&S No. 3 and 4 serves jointly the *North Coast Limited* and *Western Star* of parent lines. SP&S hauls NP, GN coaches and sleepers between Portland and Spokane along region's water-level grade

SP&S follows for more than 350 miles the trail of the first of all westbound Americans, Lewis and Clark. The main line from Pasco to Portland is dotted with sites where the campfires of these frontiersmen flickered. The 118-mile branch from Portland down the Columbia to Seaside marks the last stages of the Lewis & Clark Expedition. The two-mile wooden trestle in the brackish water of Young's Bay is within sight of the point where Lewis and Clark finally glimpsed the Pacific Ocean.

Full use is made of the deep canyons which the Columbia and Snake Rivers have trenched in the lava plateaus of the Northwest. Eastward out of Pasco the line clings to the Snake for 40 miles. It gently ascends above the water level on steel stilts. Four high viaducts furnish an easy route over deep side gorges which flows laterally to the Snake. The loftiest of these spans is that across Box Canyon. It is 250 feet from the track to the floor of the chasm. This barely perceptible grade explains why an NP *Mallet* can haul only 3200 tons over its own line between Pasco and Spokane but

William L. Van Allen, Bend, Ore.

WHAT IS BEND? To many it's a freight transfer point in Oregon between the SP&S and GN. To these Cub Scouts it's do-you-remember-the-time-the-SP&S-took-us-to-Madras?

5400 via Spokane, Portland & Seattle.

Because of the water-level grade and the rocking-chair curves, the SP&S section of the *Empire Builder* recently negotiated the fastest passenger run in the annals of the rugged Northwest. It made up time by hurtling the 380 miles from Spokane to Portland in 6 hours and 50 minutes. Even including a 10-minute delay to back out of the NP depot at Pasco, this was an average of 58 miles an hour. Such a pace may seem slow by Chicago or Twin Cities standards, but not in a realm of jagged mountain battlements.

All fleas have other fleas upon them, they say; so it is with many railroads. The SP&S, itself a subsidiary, has subsidiaries of its own. Principal among these are the Oregon Electric and the Oregon Trunk Railways. The "electric" element in the operation of the Oregon Electric is now one with the hairy mammoth, for the catenary was taken down 20 years ago. In the road's halcyon era, 50 trains of greenish-black hue left Portland each day for stations up through the vernal Willamette Valley. The railway ran motors which were fitted as sleepers, diners and observation-parlor cars, sumptuous rolling stock which has long since departed to some interurban Valhalla, but the Oregon Electric's 219 miles of track still serve the SP&S most lucratively. The Willamette Valley is the lush orchard and truck-garden of Oregon. It combines rich alluvial soil with ample rainfall and long hours of sunlight. In addition, Oregon Electric stub lines extend up into the Douglas fir forests which heavily cloak the western ramparts of the Cascade Range. Tonnage

HIGHWAY CASUALTY. Before a shorter automobile road put the Seaside train on the shelf, the railway operated 20-car specials to Oregon's most popular ocean resort, 118 miles from Portland

is abundant and diversified. Alongside the cedar poles which once held up the trolley wires, SP&S two-unit diesels today haul to Portland long freight trains loaded with logs, ship's decking, plywood, shingles, frozen strawberries, canned cherries and bottled domestic wines.

The Oregon Trunk, 205 miles of line stretching toward Bend, is almost the exact geographical center of Oregon. It links the SP&S with the California trackage of one of the parents, the GN. At Bend the SP&S turns over 110-car freights to the Great Northern, which hustles them to Bieber, Calif., for a union with the Western Pacific. The distance from Wishram on the SP&S to Bend is 151 miles. The rest of the Oregon Trunk's mileage consists of passing tracks, yards and sidings. Great Northern trackage from Bend to Bieber measures 234 miles.

LARGEST YARDS on the SP&S are at Wishram, 96 miles directly east of Vancouver along the surging Columbia. This remote Washington state community of 850 inhabitants is strategic to the operation of the SP&S. At Wishram westbound tonnage from the NP and GN is split into two major portions. Some continues down the basaltic chasm of the Columbia to Portland. The rest is transported over the Oregon Trunk to Bend on the high sagebrush plateau of central Oregon and then to California. An impressive steel truss bridge takes the tracks of the Oregon Trunk from the Washington to the Oregon shore of the Columbia at Wishram.

All SP&S trains stop at Wishram, including the *Empire Builder* with its split-second schedule. In the early days of the SP&S the junction was known as Fallbridge. The name spoke for itself. Celilo Falls throws a green curtain of water over a rocky ledge within lantern-light distance of the bridge across the Columbia. This is one of the most extraordinary railroad spans in the United States. Although it crosses the nation's second largest river, not one of the 19 stone and concrete piers is wet during low water. Construction engineers made skillful use of the massive lava boulders which whip the Columbia into a maelstrom downstream from Celilo Falls.

When delegates to the United Nations Organization Conference in San Francisco were returning to the national capital in June of 1945, they insisted upon holding their special train at Wishram, so they could watch Indians fishing for salmon with long-handled nets in the billowing spray from the falls. These delegates had particularly selected the SP&S as the route of their journey eastward from the Pacific seaboard. Travel agents in San Francisco gave them their choice of many itineraries. They never had been in the Northwest before and, to them, a railroad called the Spokane, Portand & Seattle seemed to epitomize the region of the Columbia River about as thoroughly as a Mountie symbolizes Canada.

The only SP&S regular passenger service is over the main line between Portland and Spokane. Until January 15th of this year a passenger local survived on the branch to Astoria and Seaside. However, it finally gave up the struggle, the actual death blow being the construction of an improved highway across Wolf Creek Pass in the Coast Mountains. This provided automobiles and buses with a direct 82-mile route to Seaside as contrasted with the 118-mile drag by train. Many nostalgic tears were shed on the 16-car special which marked the last passenger train from Portland to salt water. "Too little and too late," smiled an SP&S official who was aboard, recalling the dreary days when the solitary coach carried fewer than five paying riders.

But main-line passenger operation is thriving and profitable. In addition to a comparatively slow milk-carrying day train and the SP&S version of the *Empire Builder,* there is a third passenger consist rumbling over the water-level route linking Portland with the metropolis of the Inland Empire. Leaving Portland as No. 4, this train totes coaches and sleepers for the *North Coast Limited* of the NP and the *Western Star* of the GN. The

Harry M. Brown, Camas, Wash.

CONCESSION. Local version of the *Empire Builder*, trundling eastbound at reduced speed through the paper-mill town of Camas, has Diesel No. 750 carrying the GN orange for this special daily mission

NP cars are jettisoned at Pasco at 2:45 a. m. although the main *North Coast* does not arrive eastbound from Seattle until 2 hours and 30 minutes later. Thus lightened, SP&S No. 4 continues on to Spokane over the steel trestles above the Snake River. It deposits the GN equipment in ample time to be coupled into the *Western Star* headed for Minneapolis and Chicago.

In Spokane each night, this performance is repeated with an opposite twist. Sleepers and coaches are received from the westbound *Western Star,* consigned for Portland. At 1:10 a. m. the train is in Pasco, adding four or five Portland-bound cars dropped there by the *North Coast* on its lengthy journey across Washington. The Spokane, Portland & Seattle, in effect, affords an entrance into Portland for all passengers traveling on transcontinental trains of either parent railroad, the Northern Pacific or Great Northern.

Furthermore, the SP&S owns a controlling interest in the expensive trackage which allows all railroads from the North admittance into Portland. Most costly phase of this key 10 miles is the double-tracked interstate bridge from Vancouver, Wash., across the wide Columbia to the now desolate site of Vanport, Ore. When the fill at the south end of the bridge collapsed under the eroding pressure of flood waters on Memorial Day in 1948, Vanport was inundated beneath a muddy tidal surge. It took eight days of around-the-clock toil to replace the fill with a trestle. President Truman and a party of 80 newspaper correspondents had to leave their special train in Olympia and fly into encircled Portland.

After ill-fated Vanport, the railroad tracks enter Portland through a deep cut and then span the Willamette River

on another truss bridge. This right-of-way belongs two-thirds to the SP&S and one-third to the Northern Pacific. As the only railroad with its terminal in Portland, the SP&S is in operating charge of the crucial gateway. When the Vanport flood severed the fill beside the Columbia, General Manager Stanton and other SP&S executives slept in their offices until trains moved across the river again.

ALTHOUGH the north bank of the Columbia is the easiest of all railroad grades to the Pacific slope, trains did not roll along it until the advanced

GOLD TERRITORY. In the heart of Columbia Gorge not far from Wind Mountain the SP&S' golden spike was driven home on March 11, 1908, only to be uprooted and taken away by pompous citizens as soon as the ceremony was over. Train in distance is a shortened *Builder*

year of 1908. A number of extraordinary circumstances contributed to this delay in the use of a natural route to the resources of the country's Western rim. Henry Villard, the German immigrant who later acquired the Northern Pacific, was a competitor of the NP in 1880. He had built the Oregon Railway & Navigation tracks along the Columbia's south shore to meet the Oregon Short Line, which was linking the Northwest with the Union Pacific. Villard realized that the NP could imperil his Oregon railroad dynasty by laying rails down the opposite bank of the Columbia. He forestalled this rivalry by drawing up a compact which relinquished to the Northern Pacific all territory north of the Snake River. The Oregon Railway & Navigation Company was to exploit the region to the south. The NP, in turn, was to enjoy access to Portland over Villard's right-of-way on the southern bank of the canyon.

For nearly a quarter of a century, while trains whistled blithely on the opposite side of the Columbia, the north shore lay undeveloped for transportation. Avalanches slid unheeded down its sheer ramparts, and hackberry bushes and stunted fir peered from the brink of awesome cliffs. It is true that the southern bank was not so precipitous and thus more adapted to the notching of a grade without great expense. But the southern bank faced north and received only a minimum of winter sunlight. It was

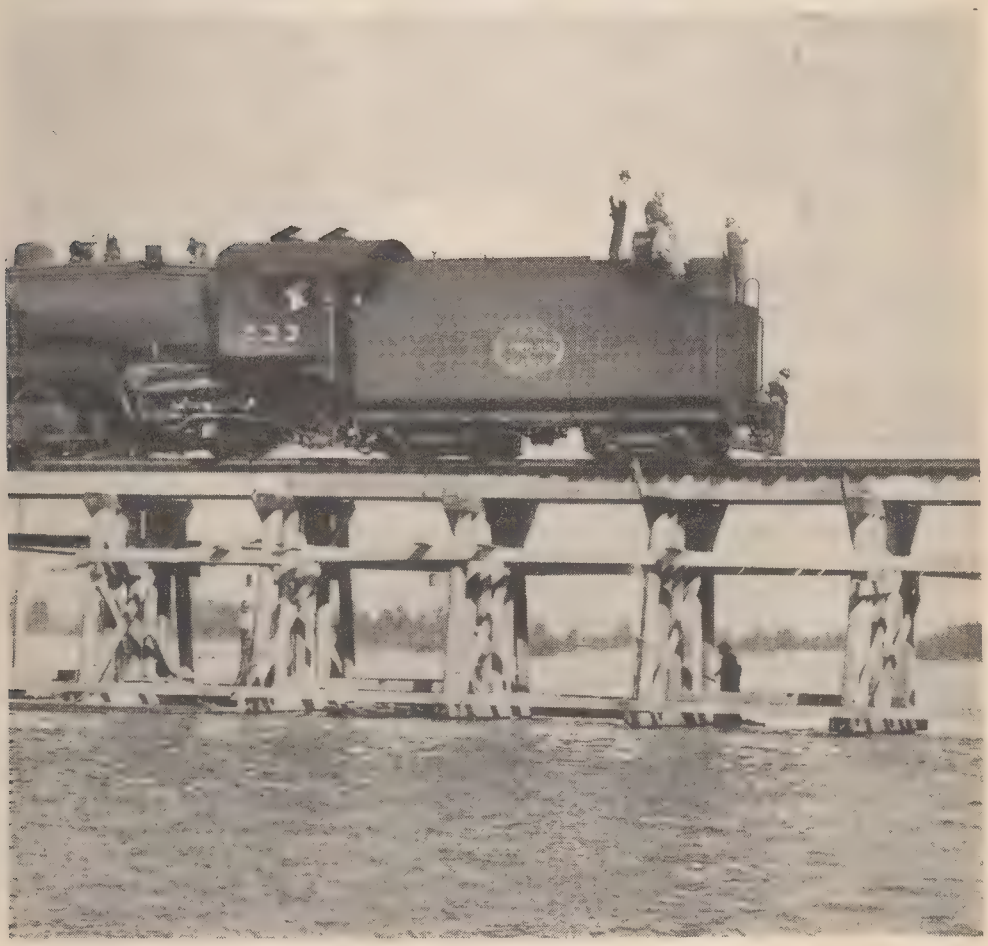
TREAD LIGHTLY. *Mikado* 533 gingerly tests temporary trestle west of Vanport, flooded on Memorial

locked with ice and snowdrifts when the other shore gleamed clear and free. Villard had overlooked this phenomenon when he chose the Oregon bank as the route of the original line through the long gorge.

Jim Hall was always doing the dramatic. He never mumbled in his beard when he could broadcast to the world, even in that era before radio and television. He selected the occasion of Portland's Lewis & Clark Centennial to announce that his engineers had completed surveys down the north shore of the Columbia. "I intend to enter Oregon," said Hill, for to him the first-person pronoun was a synonym for the whole far-flung Great Northern sovereignty.

Because the NP once had relinquished rights to the north shore, it had to be part of the project. As soon as the Spokane, Portland & Seattle Railway Company was incorporated, the GN and NP each subscribed for $36,855,000 worth of 4 percent gold bonds. When the men in the counting house were finished, the labor of the men with pick axes and blasting powder began. E. H. Harriman, who had superseded Villard as the dominant railroad executive on the south shore of the Columbia, was not jubilant over this prospective competition with his Union Pacific system. At Cape Horn (a massive battlement extending into the river like a ship's prow) Harriman commenced building a tunnel. His laborers used wheelbar-

Day in '48 when the fill collapsed and let the Columbia in. Portland-bound Harry Truman had to fly



Maurine Neuberger

ON YOUR MARK . . . Train No. 5, *right* with *Pacific* 635, and NP's *Alaskan* leave Pasco almost simultaneously but the SP&S to Portland beats the diesel's time to Seattle by more than two hours, thanks to the water-level grade

rows at the west approach to the bluff. Hill, starting at the east, had $30,000 worth of elaborate construction equipment. Only one tunnel could be drilled through the Horn. If Harriman drilled it, the new SP&S might be stopped before it was well under way. Hill's lawyers finally went into circuit court and proved that Harriman had no serious plans to build a railroad on the north shore. This gave the SP&S exclusive rights to Cape Horn. The rivalry between the millionaires spread to the road gangs. On a dull summer's evening Union Pacific track crews would raft across the river and challenge SP&S tracklayers. More than once the SP&S retaliated, sometimes with more than fists and hob-nailed boots. Deputy sheriffs were kept busy.

Hill was willing to spend money to get a good grade. At some stretches in the gorge, construction costs on the SP&S averaged $100,000 a mile and this did not include the expense of blasting tunnels. Such a sum was tremendous in a period when men toiled for $1.50 a day and a full-course prime ribs dinner in Portland cost 35 cents. M. F. Kincaid, the mechanical valuation engineer, pointed out succinctly that "whatever claims are made for the cost of ballasting and surfacing per mile, it will be readily seen that this road is to be in first-class shape and any claims our engineers may make will be fully justified."

On March 11, 1908, a long excursion train rolled slowly eastward up the north bank of the Columbia from Vancouver. Aboard its parlor cars were prominent citizens, leading politicians, cases of champagne and ice boxes full of turkeys, ducks, chickens and select cuts of beef. At Mile Post 50½, not far from the present site of Bonneville Dam, long-winded speeches were delivered and a golden spike driven into a railroad tie. Wind Mountain looked down somnolently on the scene. This was where Lewis and Clark had camped as they bore the flag to the Pacific, but the ethics of the pompous occasion did not quite match the valor and selflessness of the bygone argonauts.

"I might add," Engineer Kincaid reported to his employers, "that the prominent citizens drew the golden spike after the ceremony and took it with them."

With the route along the Columbia in operation, the SP&S soon spread out from Portland like the spokes of a wagon wheel. It bought from a lumberman named Hammond the line he had built to the mouth of the river; it also joined in operation of the Oregon Electric's far-flung interurban

network. To this day, SP&S work trains include many parcels of Oregon Electric equipment. Gandy dancers bivouac and eat in the cars which once swayed through the Willamette Valley at supper time with standing room only.

Long ago physical warfare with the UP was replaced by amity. The bridge across the rapids at Wishram provides an interchange between the lines. When half a mountainside fell away on the Oregon side of the river, the *City of Portland* and other crack Union Pacific trains ran in and out of Portland on the water-level roadbed of the SP&S. This went on for three weeks and SP&S engineers got to know thoroughly the feel of UP throttles. When the tracks of the SP&S are choked by slides, the Harriman tracks on the other shore afford convenient running rights. This is a happy contrast to the era in which crews of the two systems looked at each other down the barrels of .45s. In general, the UP right-of-way is out of commission longer than its counterpart across the river—all because Villard's survey parties of 70 years ago forgot that the southern edge of a stream faces the forbidding north.

TODAY, the UP and SP&S are partners in a crucial and delicate transfer of cargo for the conduct of war. At Hermiston, in the arid sagebrush, the U.S. Army maintains one of the world's largest ammunition dumps. Thick concrete igloos contain blockbusters, machine-gun bandoliers and other sinews of war. This lethal tonnage is put aboard Union Pacific trains and sent downhill along the gentle grade on the Oregon bank of the Columbia. At Portland the explosives are transfered to the SP&S, which rolls them on the Astoria-Seaside

CELILO BRIDGE. The long SP&S truss span at Wishram takes freights to the Oregon Trunk Railway across the river. All piers are dry when the Columbia is at low water

Maurine Neuberger

SAM HILL'S MARYHILL. At Mile 114, east of Portland, Jim Hill's son-in-law erected three-story castle in lava wilderness. After Queen Marie of Romania dedicated it, the fortress became Maryhill and gave its name to a station on the SP&S

branch to the ammunition port of Beaver. This is approximately 60 miles below Portland on the river. At Beaver, longshoremen receiving double pay for this hazardous employment load ocean-going freighters with bombs and shells intended ultimately for the enemies of the United States. New rails and ballast on the Seaside branch assure this unstable cargo a steady ride to the docks at Beaver.

Three freight trains are moved each way daily by the SP&S between Portland and Spokane. Most of them are dragged by four-unit diesels and include at least 100 cars apiece. However, some steam power still is used, and to good effect. *Mallets* still can trundle a lot of tonnage, and occasionally they are worked in tandem with 35-year-old *Mikados*. The 14 cars of the night passenger train between

BYGONE INTERURBAN. Beside old power poles of the Oregon Electric Railway, two-unit SP&S diesel hauls a freight northward through Willamette Valley. Trackage of old trolley system provides "The Northwest's Own Railway" with some lucrative freight business

Spokane and Portland are moved by a *Northern*. This is the schedule which hauls cars of both the *North Coast Limited* and *Western Star*. These steamers were ordered in 1939, shortly before the company began shifting over to Alco and EMD diesel power.

Locomotive colors of the SP&S' diesel-electrics consist of a dark green with yellow facings. However, one 2000-horsepower unit is painted in the prevailing orange of the Great Northern. It is the standard motive power on the SP&S *Empire Builder* schedule. On the SP&S' Oregon Trunk subsidiary, one grade of 1.5 percent challenges freight trains between Metolius and South Junction. This explains why a disproportionate number of the company's six 4-unit diesel combinations are used over the Oregon Trunk trackage between Wishram and Bend. Frequently the same diesel will go all the way from Bend to Spokane. Fueling takes place at Wishram or at Lamont, 45 miles southwest of Spokane.

Although the SP&S controls the truss-bridge portal into Portland, the reverse situation pertains in Spokane and Pasco. SP&S trains reach Spokane over a high steel viaduct owned by the Great Northern. At Pasco the entrance trackage belongs to the Northern Pacific. The NP bridge across the Columbia in this vicinity soon may have to be replaced or substantially raised because of the rising waters impounded by McNary Dam. NP lawyers now are in Washington, D. C., wrangling over the sums which the railroad and the Federal treasury will contribute to this project.

Now the Spokane, Portland & Seattle possesses outright 1533 freight cars and holds an additional 1096 under contingency sales. Passenger cars number 64, while work-train equipment totals 579 pieces of rolling stock. None of this is exceptionally impressive by transcontinental or Eastern seaboard standards, but it is redoubtable for a railroad operating entirely within the crenelated mountain barriers which mark off the basin of the Columbia River from the rest of the country.

MEN identified with the brace of parent companies have always demonstrated an affectionate, paternal interest in the SP&S. Jim Hill himself liked to sit at the back of a train and watch the towering ramparts of the Columbia Gorge twist and pass. He commented jubilantly whenever a tangent of the SP&S contrasted with a curve on the Harriman line across the river. If the comparison was of an opposite sort, he pursed his lips and kept silent. He showed pleasure over the fact that the UP tracks on the Oregon shore quit the Columbia a measurable distance before the SP&S was no longer within sight of the West's greatest waterway.

Hill's son-in-law, Sam, demonstrated his affection for the SP&S in a curious fashion. At Mile 114 out of Portland he erected a three-story rectangular castle resembling a chateau. He put bars on the windows and filled it with medieval treasures. In 1926 he persuaded the visiting Queen Marie of Romania to dedicate the fortress jointly to the two of them as "Maryhill." When he died Sam Hill left a legacy of $1,200,000 to maintain Maryhill as a museum. He also stipulated that his own ashes should be deposited there amidst the bric-a-brac. The tablet bears an inscription: "Samuel Hill—amid Nature's unrest, he sought rest."

An SP&S station marks where Queen Marie descended from a special train to bless the castle in the lava wilderness. It is called, of course, Maryhill. No. 5 westbound and No. 6 eastbound stop at Maryhill now to let off supplies for the custodians of the museum. An occasional passenger even descends. The rest of the trains honk mournfuly and continue along the great slot of the Columbia Gorge. On a railroad as busy as the SP&S there is too much work to do to spare more than a fleeting whistle for the dim and forgotten past.

IN CONJUNCTION with this article our monthly engine roster, on the next four pages, is: *Locomotives of the Spokane, Portland & Seattle*. It was supplied through the good graces of J. A. Cannon, SP&S' general superintendent of motive power

MAJORITY RULE. Of the SP&S' 42 steamers, all oil-burning, 12 are Class O *Mikados*. No. 531 was one of the first batch built for the road

Harold B. Miller, Palo Alto, Calif.

SUPER HEAVYWEIGHT. Simple articulated No. 901 and her Class Z-6 sisters weigh more than 510 tons, are only 15 years old

Miller

ANOTHER YOUNGSTER. *Northern* 700, whose 77-inch drivers are the largest on the SP&S, came out shortly before World War II

AN ANTIQUE, COMPARATIVELY. Some *Consolidations* on the SP&S date back to 1907

Locomotives of the
Spokane, Portland & Seattle

Steam

Class	Numbers	Cylinders	Drivers	Engine Weight	Tractive Effort	Builder & Date
			2-8-0 (Consolidation) Type			
N-2	356–368	23½ x 32	55″	218,720	64,600	Baldwin, 1907, '17
			2-8-2 (Mikado) Type			
O-3	530–539	28 x 30	63	533,600	63,460	Alco, 1917
O-4	550, 551	28 x 32	63	533,500	71,083	Baldwin, 1920
			4-6-2 (Pacific) Type			
H-1	621–626	23½ x 30	73	484,583	38,580	GN, 1927
			4-8-4 (Northern) Type			
E-1	700–702	28 x 31	77	865,520	69,800	Baldwin, 1938
			4-6-6-4 (Simple Articulated) Type			
Z-6	900–905	23 x 32	69	1,031,300	104,500	Alco, 1937
Z-8	910, 911	23 x 32	70	1,081,000	106,890	Alco, 1944

Diesels

Numbers	Horsepower	Drivers	Engine Weight	Tractive Effort	Builder & Date
			B-B (Switcher) Type		
10, 11	660	40	198,400	59,400	Alco, 1941
20–28	1000	40	230,000	69,000	Alco, 1940
30–34	1000	40	237,700	71,300	Baldwin, 1940; '42, '45
40–42	1000	40	247,546	61,886	EMD, 1948
43–45	1200	40	245,910	61,475	EMD, 1951
			B-B (Road Switcher) Type		
50–55	1000	40	242,500	60,625	Alco, 1945
60–62	1000	40	243,060	60,765	Alco, 1949
65–68	1600	40	243,500	60,875	Alco, 1950
69–78	1600	40	245,000	61,250	Alco, 1951
			A-1-A (Passenger) Type		
750	2000	36	207,610	51,900	EMD, 1948
			B-B (Passenger) Type		
800, 801; 802	1500	40	234,275	58,740	EMD, 1947; '48
			2 B-B (Freight) Type		
850–855	1500	40	234,000	58,000	Alco, 1948
			4 B-B (Freight) Type		
856–864	1500	40	238,000	59,000	Alco, 1949
866, 868	1600	40	240,900	60,000	Alco, 1951

REPRESENTATIVE. Of the railway's 66 diesel engines, one half are road switchers put out by Alco between '40 and '51

PARENT PRODUCT. Great Northern, owner of the SP&S with the Northern Pacific, manufactured offspring's *Pacifics* before the Depression

PORTAGE PIKE

JAMES T. LYNCH

A Canadian Northwoods Eden Has Its Own Rail Shuttle Service

THE WORLD'S smallest and shortest commercially operated railroad —that's the proud boast of the Huntsville & Lake of Bays line

Dubbed "the Portage Railroad," it operates over 42-inch narrow-gage rails, one and one-eighth miles between North and South Portage in the Lake of Bays District of Ontario. As the name implies the line is a portage over the hump that separates Fairy Lake and Lake of Bays, completing the service of the steamer

Algonquin, which sails from Huntsville to North Portage, and the Motor Launch Iroquois II, plying between South Portage and Dorset. Summer visitors to the district and to such famous resorts as Bigwin and Tally Ho Inns will recall their ride on the Portage.

Equipment consists of two small engines, 2 flatcars and one boxcar, and passengers ride in what were once Toronto and Atlantic City horse-drawn streetcars. It is a most complete system, with its own telephone lines, roundhouse, water tank and terminals. Owned by Mrs. Pauline Gill, of Brockville, the line is managed by a board of directors, and president C. R. McLennan of Huntsville. Mr. C. O. Shaw, father of Mrs. Gill, started the railway in 1906 to haul tanbark.

Some 15,000 passengers, 500 tons of freight, plus mail were carried last year. A return fare is fifty cents, rather expensive as rail tariffs go, but this line operates only three months in the year.

The payroll lists the names of four men, all residents of South Portage: Superintendent Lou Thompson, the only full time employe, who has been with the Portage since 1919; his cousin, Gilbert Thompson, engineer, employed since 1939, and Gerald Bullock and Joseph Landry, brakemen. The four handle all jobs and all train operations. The H&L ofB's engines can hit twenty miles per hour but for safety's sake the running speed is held to fourteen. Only one accident mars the safety record. Ten years ago a cow wandered onto the right of way; the train was derailed, the cow killed, but no passengers were injured.

Trains run eight single trips a day up and down the line, and a special is run for any canoeists or campers who want their kits trundled over the portage. The cost of a special on this unusual railway —five dollars.

The *Portage Flyer* may look like the Toonerville Trolley to big railwaymen, and to the folks up Portage way the *Montreal Flyer* is just a name.

BIG DEAL. Orders to run a special train (charge $5) are handed Brakey Joe Landry by Superintendent Lou Thompson in the small office which serves as headquarters at the terminal in South Portage. Sad to relate, the rambling cookstoves shown on pages 42 and 43 were snapped as they made their last run out of North Portage. Built in 1888 the little Porter saddle-tankers are now on display in the Chicago Museum's transportation room. To replace them, Portage Pike got newer and more powerful engines built by Montreal Locomotive Works

MERRY-GO-ROUND with iron horses is small fry's delight. "Air-conditioned" rolling stock first saw service as horse-drawn streetcar in faraway Atlantic City. *Below:* Passengers jump off here at South Portage to take steamer *Algonquin* which sails up Fairy Lake for connections with regular rail lines

BUILDING A TRAIN. At South Portage Terminal a freight consist is made up. Usually only one engine is needed but if the drag is heavy enough the other loco is cut in, with Superintendent Lou Thompson doubling as helper hogger.

BOAT TRAIN. One spot chuffs out of dock-station building at North Portage after depositing a load of passengers for *Algonquin* which sails up Fairy Lake and Lake of Bays to Huntsville

MR. RAILROAD. The only full-time employe of the H&LofB, Lou Thompson is superintendent and general factotum. We'd say that his carefree look speaks well for his job, which includes looking after right-of-way and maintaining equipment when pike is shut down in cold weather

NO PULLMANS on the one and one-eighth-mile H&LofB. Passengers shuttling between boats pay steep 50c roundtrip fare with a smile. Little Portage Pike hauled a respectable 15,000 passengers and 500 tons of freight last year over its 42-inch gage rails between the two lakes

FAIRYLAND between Fairy Lake and Lake of Bays is right-of-way for Portage Railroad. Scene *above* is near Huntsville. In winter which comes early here, these woods are a wonderland of white, with the noise of the little rattler hushed till summer rolls round again

SHORT AND SWEET as a summer romance is Brakeman Gerald Bullock's job on the fair-weather Huntsville & Lake of Bays. To us it seems like getting paid for having fun. Before the snow flies the trainman is making his living elsewhere

JOB SECURITY is perhaps what puts the happy smile on the face of Gilbert Thompson. He has no fear of being bumped from his seat box because he's the Portage Pike's only regular engineer. With the H&LofB since 1939, he has more whiskers than any employe except cousin Lou

BIG CITY TO BACKWOODS is the story of the well-ventilated car, *below*, which began life as a horsedrawn streetcar in Toronto. Huntsville & Lake of Bays fitted it with 42-inch trucks, now uses it to haul passengers between boats

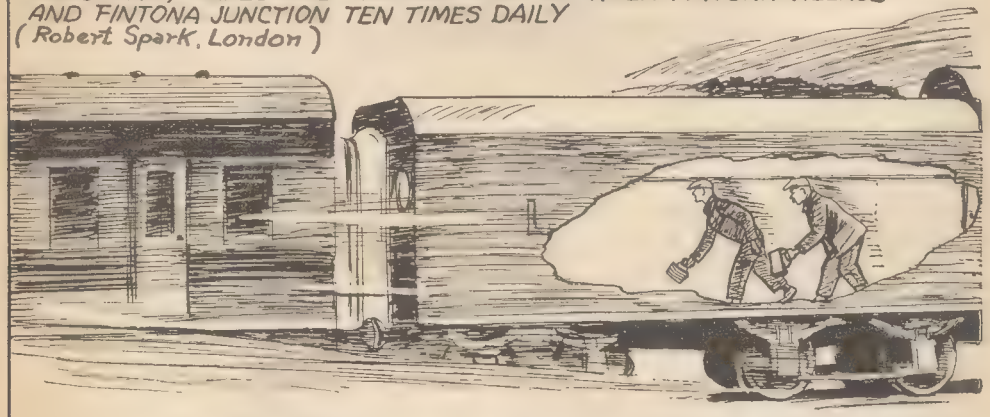
IN THE SHADE of a fragrant cedar, Switchman Joe Landry opens the gate to Y so that train can back in and turn around for return trip. Portage Pike runs eight trains each way daily

HIS OWN TALLOWPOT, Gill Thompson bends a strong back to the task of baling in some big black diamonds. When he gets her hot he'll whistle off as he becomes the engineer again

ALONG THE IRON PIKE

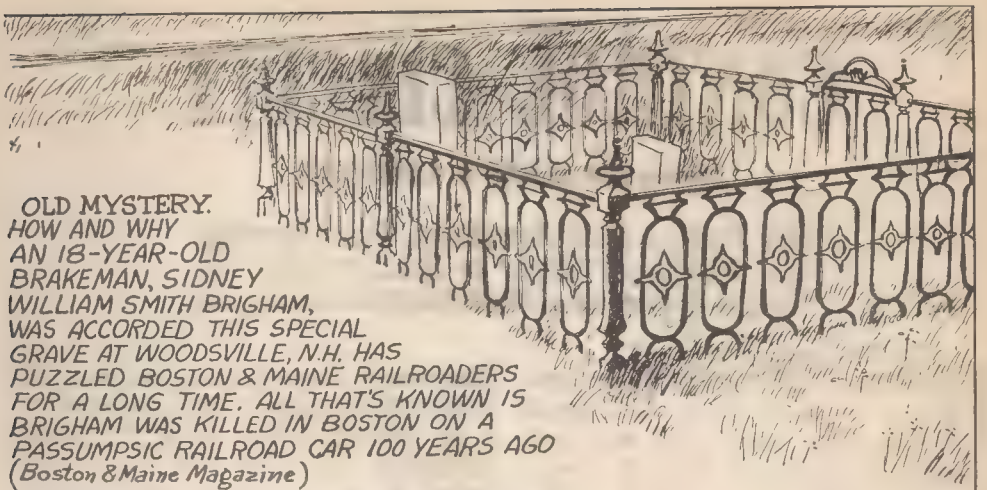
by JOE EASLEY

ONE HORSEPOWER RAILWAY. IRELAND STILL HAS A HORSE-DRAWN TRAM, OPERATING PROFITABLY SINCE 1853. DICK, MOTIVE POWER AT THE HEAD END, MAKES THE 3/4-MILE TRIP BETWEEN FINTONA VILLAGE AND FINTONA JUNCTION TEN TIMES DAILY
(Robert Spark, London)

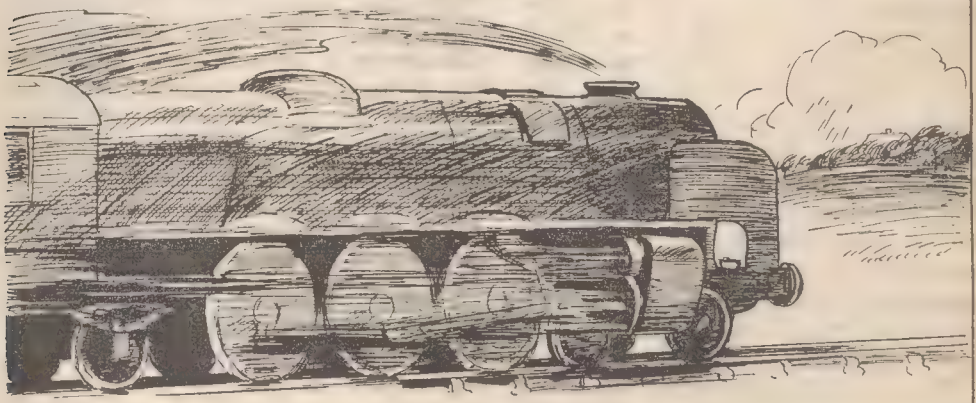


ENGLISH CORRIDOR. ENGLISH CREWS OF THE CAPITALS LIMITED FROM LONDON TO EDINBURGH CHANGE WITHOUT MAKING A STOP AT 200-MILE WORKING LIMIT. THEY WALK THROUGH A PASSAGE IN THE TENDER 18 INCHES WIDE AND 5 FEET HIGH. THE BRITISH HAVE 20 SUCH TENDERS DESIGNED BY THE LATE SIR NIGEL GRESLEY FOR THEIR CLASS A4 PACIFICS
(I. Kirkham, Stoke-on-Trent, England)

RAIL BARBER. AL ROMANO HAS SERVED ABOARD THE TWENTIETH CENTURY LIMITED FOR 30 YEARS, CATERING TO REGULARS WHO INCLUDE SOME OF THE NATION'S GREAT MEN. FAMOUS TRAIN HAS HAD A BARBER SHOP SINCE ITS FIRST RUN IN 1902
(New York Central Headlight)



OLD MYSTERY.
HOW AND WHY AN 18-YEAR-OLD BRAKEMAN, SIDNEY WILLIAM SMITH BRIGHAM, WAS ACCORDED THIS SPECIAL GRAVE AT WOODSVILLE, N.H. HAS PUZZLED BOSTON & MAINE RAILROADERS FOR A LONG TIME. ALL THAT'S KNOWN IS BRIGHAM WAS KILLED IN BOSTON ON A PASSUMPSIC RAILROAD CAR 100 YEARS AGO
(Boston & Maine Magazine)



DOUBLE-TAKE.
RECENT KATY TRAIN ORDER WAS NO TEXAS TALL TALE. ALMOST WIPED OUT IN THE BUFFALO BILL ERA, THE ANIMALS HAVE FLOURISHED AGAIN UNDER LONG-TERM PROTECTION
(A. F. Von Blon Jr., Waco, Texas)

16 MP&S 560

Missouri-Kansas-Texas Lines

Form 26

TRAIN ORDER No 327

To C & E NO 31

JUNE 19 1952

At RINGGOLD TEXAS

LOOK OUT FOR BUFFALOES ON TRACK BETWEEN RINGGOLD AND EDWARDS

R. C

Made COMPLETE Time 9 12 A M M TOMPKINS Opr.

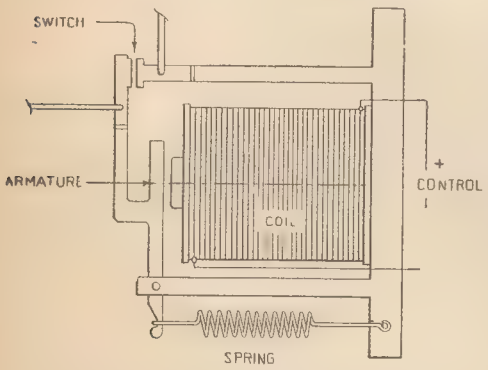
CONTROL CIRCUIT

Drawings by HENRY B. COMSTOCK

This Hookup Does Everything, From Running The Windshield Wiper to Synchronizing the Various Motors of a Multi-Unit Diesel Engine

BEFORE COMPLETING our general study of the control circuit let's see what engineers have worked for in its design. Here is a hookup which might be considered a drone, because the current which goes into it does not add one pound of tractive force to the locomotive's performance. For that reason, as well as for the safety of the crew, every effort has been made to hold down the power demands of the numerous gadgets which provide speed and reversing control, synchronized operation of any number of diesel units and a complete alarm system to warn an engineer of any one of a score of conditions which might damage the locomotive.

The whole system depends upon two basic types of actuating device. One is the electro-pneumatic valve, which we described in connection with the contactors.



1 SIMPLE RELAY consists of an electromagnet which attracts an iron bar or armature when current is applied, releases it in response to spring tension when current is shut off. Attached to the armature is an electrical contact which presses against a second, fixed contact when the magnet is energized, completing another circuit

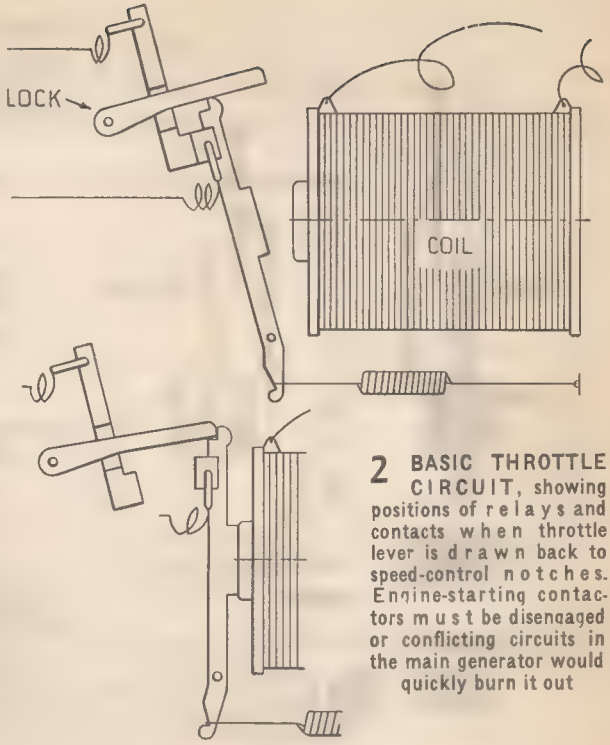
Here we let a small electro-magnet open a door for a supply of compressed air to move relatively heavy parts. The other controlling mechanism is a relay. These relays take many forms. The simplest type consists of a magnet with a bar of soft iron on a hinge adjacent to it. The bar, or armature, is normally held away from the magnet by a small spring, but when current passes through the coil the spring tension is overcome and the armature swings toward the core of the magnet. At the same time a switch contact attached to the armature makes connection with a stationary terminal, closing an electric circuit (*Figure* 1). Substitute any number of switch contacts, each making connection with a corresponding terminal, and a like number of circuits can be closed simultaneously. Or arrange the terminals so that some of them are on either side of the armature. With that design certain circuits will be closed when the magnet is energized, while others will be opened. The result is a wide range of interlocked circuits, all operated from a single relay.

LET'S TRACE the most important of the many control circuit hookups, the one which responds to the movement of the throttle lever. In our drawing *(Figure 2),* we show a battery supplying the current. Actually this is only true when the diesel engine is shut down. Once the engine has been started and revved up, a reverse current relay cuts out the storage cells, and the auxiliary generator provides all the control-circuit power.

The battery has the important function of turning over the main generator

when it is used as a motor to kick over the big diesel engine. Once this duty is performed the starting contactors open up in response to the release of magnetic valves. At the same time another set of contacts, cut into the throttle control circuit, flick over to the closed position. The reason for the interlocked action of the switches is obvious. The main generator cannot be operated as a motor and a power manufacturing plant simultaneously without producing a fancy display of fireworks.

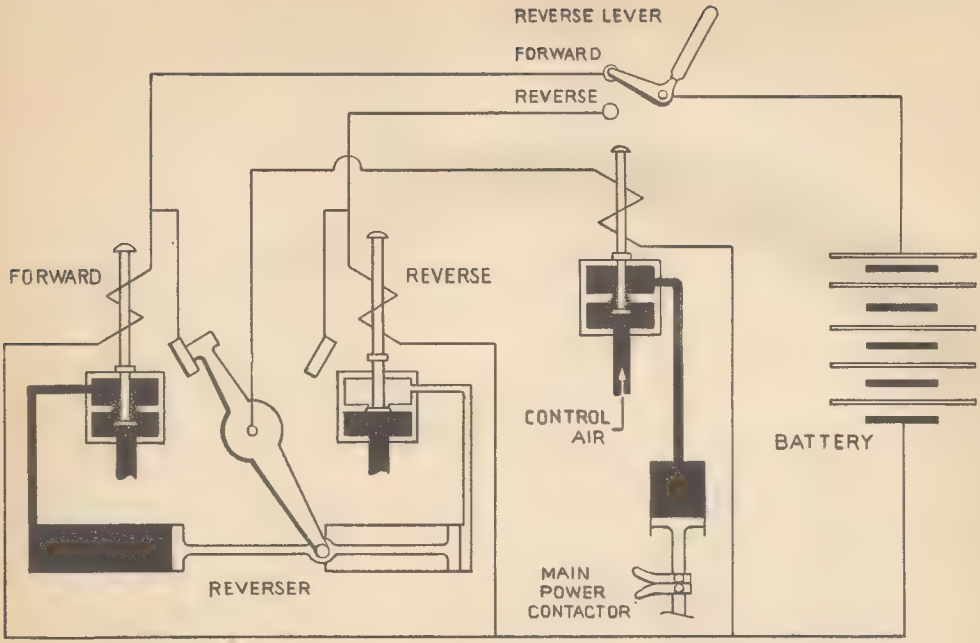
When the switches are in their normal position (closed) for the throttle-control circuit, current will still fail to flow until the engineer eases the throttle back to the No. 1 notch. At that point the circuit is completed and if all equipment is in proper working order the *GF* (generator field) relay will operate, closing the contactors and allowing juice to enter the main generator fields, setting up the flux that allows them to produce electricity.



2 BASIC THROTTLE CIRCUIT, showing positions of relays and contacts when throttle lever is drawn back to speed-control notches. Engine-starting contactors must be disengaged or conflicting circuits in the main generator would quickly burn it out

There is one other switch in the throttle circuit which plays an important part. That is the ground relay. The coil in this device is so connected that in the event of a short in the high-voltage diesel power circuit, current flows into the windings and causes the relay armature to snap toward the coil. This opens the throttle circuit, parting the GF contacts and making the generator inoperative. Otherwise the entire unit might be burned out and the diesel engine destroyed. As a further safeguard, the ground relay is so constructed that once the switch opens it automatically latches in that position and must be reset manually *(Figure 3)*.

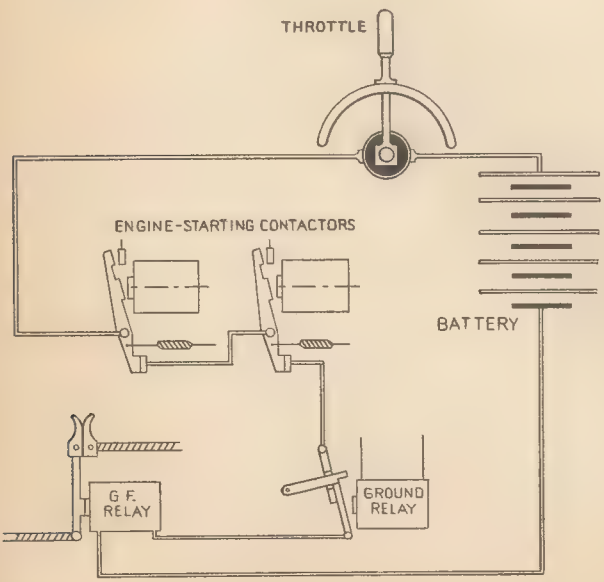
What about reversing? Here again there are safety problems to be met to prevent accidents and failures. In *Figure 4* we see a basic reversing circuit with the current coming from the batteries and its performance determined by a reverse lever. When this lever is placed in forward position a path is set up between the battery and the forward electro-pneumatic valve. A magnet opens a route for compressed air to enter one cylinder of an air motor and to be released from another, throwing to one side a switch arm called a *reverser*. Omitted from the drawing, for the sake of clarity, is the heavy-duty power circuit switch on the reverses. This switch determines the direction of high-voltage current flow to the traction motors. However, we show a control circuit switch at the top of the reverser and you will notice that it sets up a secondary path for low-voltage electricity to flow through a magnet on a valve which controls a main power contactor. A similar circuit closes when the reverser is in backward position, moved there by the second cylinder of the air motor. But during the instant when the change from forward to reverse is being made, the main power contactor valve is de-ener-



3 GROUND RELAY which breaks the throttle circuit when a short occurs in the power circuit has automatic locking device which must be reset manually after each circuit break. Drawing shows normal position plus the action of the lock

gized, opening the contacts and preventing any damaging conflict of high-voltage polarity.

The electrical engineer has done a notable job in designing control equipment. Mindful of a wide variety of operating conditions he has made it possible to harness any number of locomotive units so they may be controlled from a single throttle. And he has provided maximum safety for both the engine units and the men who run them.



4 BASIC REVERSING CIRCUIT. Reverse lever closes one of two subcircuits, actuating corresponding electro-pneumatic valve which operates air motor and throws reverses to right or left. Not shown is the arrangement of switches on reverser which directs high-voltage current to the traction motors

Information Booth

ALFRED COMSTOCK

Q *Please supply some information about the transparent boxcar which the Union Pacific is building*—Charles Miesse, 721 West Lemon Avenue, Monrovia, Calif.

A The car will be used to demonstrate to yard and train workers the effect of switching and other impacts on the contents. One entire side of the car will be fitted with plexiglass. It will also have an outside speedometer 3 feet in diameter so railroad employes standing many feet away can check the speed during demonstrations. The car, first of its kind according to the Union Pacific, will be built in the company's Omaha shops.

* * *

Q *Print a brief account of the special Lackawanna train that carried a famous New York City specialist to the bedside of the dying President McKinley.*—James P. Munroe, 4400 Genesee Avenue, Dayton 6, Ohio.

A On September 11, 1901, with John Draney at the throttle, Doctor Janeway was taken from Hoboken to Buffalo, a distance of 395 miles in 6¾ hours, with the train maintaining close to a 60-mile-per-hour average for the entire run. Draney said he had a green light all the way and he went so fast the doctor rode all the way sitting in the aisle. The schedule kept by the special is all the more remarkable when it is considered that between Dover, N.J. and the Delaware River and between Clarks Summit and Binghamton the run was made over the winding track and grades now bypassed by the Lackawanna cutoff.

* * *

Q *Will you print a history of the Deep Creek Railroad that used to run from Wendover to Gold Hill, Utah?*—John Z. Roth, 165 North Main Street, Tooele, Utah.

A The Deep Creek Railroad Company was organized in Utah on October 11, 1916, and the contract for construction of the line from Wendover on the Western Pacific, southward to Gold Hill was awarded to the Utah Construction Company on October 16th. Grading began on November 1st and the road was open for freight transportation in March 1917, and for passenger and express business a month later. Construction costs amounted to $450,000. Construction of the road was financed by Captain Duncan McVichie and associates, chief among them being the late Charles M. Levey, then president of the Western Pacific, and Senator Reed Smoot of Utah. McVichie was the first president of the line and W. S. Mathews, chief engineer. Later, through purchase of the entire capital stock, the Western Pacific acquired controlling interest. Mason Moore was manager until January of 1939 when he was succeeded by Percy Hewitt, the engineer who served until the road was discontinued. Bill Veasey was its first locomotive engineer; Bill Turner, first conductor; Fred Bernie, first fireman.

The Deep Creek Railroad had 46 miles of single track line and 1.74 miles of sidings, laid with 52- 60- and 85-pound standard-gage rail. Equipment consisted of two locomotives, one combination passenger coach, one freight car and one water car. The company owned a depot and warehouse in Gold Hill and used the Western Pacific depot in Wendover. The combination coach, which originally belonged to the Southern Pacific Railroad, was built about 1880. It was typical of passenger cars at that time, having a coal stove, kerosene lamps, red plush seats and fancy brass trimmings. The coach was

Western Pacific

THERE WAS GOLD in them thar hills all right, but copper was what was needed to keep the little Deep Creek Railroad running. *Consolidation, above and below,* was one of two engines owned by the desert pike, which was absorbed by the Western Pacific before final abandonment in 1939

Fred Stindt, San Mateo, Calif.

VINTAGE 1880, red plush-lined combination coach, *below,* was bought from SP by Deep Creek; on road's demise it was purchased by the California & Nevada Railroad Historical Society

Western Pacific

purchased by the California & Nevada Railroad Historical Society on August 4, 1939. It was cleaned, repaired and repainted for use as a clubroom on the campus of the University of California at Berkeley.

During its heyday the Deep Creek Railroad maintained a daily schedule, leaving Wendover at 6:30 a. m. and returning at 5:00 p. m. The trip took 3 hours one way. Much of the route traversed the Great American Desert in northwestern Utah. During its later years, the road operated at a deficit. One of the reasons why the railroad was forced to discontinue and eventually abandon operations was that the copper mining activities, for whose accommodation the line was originally built, failed to materialize and consequently left the road without a source of supporting revenue. What the mine owners failed to take into consideration was that Gold Hill is predominantly a gold producing district and other minerals such as copper, tungsten, arsenic, were merely added sources of income.

The Western Pacific, which absorbed the Deep Creek, recommended abandonment of the property and the Interstate Commerce Commission authorized the move on July 12, 1939. The last run was made on July 28, 1939. It was a sad day for the residents of Gold Hill when the wrecking crews arrived to remove the tracks. Though the fortunes of the town had been lowered considerably since its glorious boom days, its residents still hope that the workings will necessitate the construction of another road to replace the Deep Creek line, which served the Deep Creek and Ferber mining districts.

* * *

Q *What are the duties of a yardmaster? I am primarily interested in knowing whether his job entails any responsibility for track maintenance.*—Henry F. Albert, Major, U.S. AF., Box 453, Venice, Calif.

A The yardmaster is a dispatcher of trains in the yard. His responsibility is the breaking up, classification and rapid and safe dispatch of freight trains and cars and motive power in the yard. The section foreman, and his boss on the division, the roadmaster, are in charge of track maintenance. The train dispatcher is responsible for a train until it arrives in the yard.

* * *

Q *I understand that the world's fastest start-to-stop railroad runs have been made in Italy. Will you publish some information on this?*—Eugene Koster, 504 Concord Avenue, Wilmington, Delaware.

A With over 4000 miles of electrified railway, far more than any other country, Italy holds high place for the world's fastest start-to-stop railway runs. Three-car electric trains of the Italian State Railways on a run of 133 miles from Rome to Naples, averaged 96 miles an hour throughout, and touched a maximum speed of 129 miles an hour. Owing to the complete absence of coal in Italy, railway electrification has made great progress since it was introduced in 1901. The three-phase, 3700-volt 16-⅔ cycle system was standardized for all main-line electrification except short lengths of third rail DC at Milan. Since 1925, however, the 3000-volt DC system has been adopted as standard for future use.

By December 31, 1939, there were 2989 miles of line electrified, and a program for the electrification of a considerable additional distance is now under way. Apart from tourist traffic, a large horticultural and agricultural business is handled by the Italian State Railways, which operate a train ferry between the mainland and Sicily, where much of the fruit traffic for Central and Northern Europe originates.

* * *

Q *Please furnish some data regarding the early shipment of cattle by rail.*—Everett C. Fink, 65 Westview Drive, Bergenfield, New Jersey.

A One of the first rail cattle shipments, consisting of 100 head, Cincinnati

to New York, occured in 1852, having first been driven from Lexington, Ky. They were carried in cars from Cincinnati to Cleveland; by steamboat to Buffalo; driven to Canandaigua; moved in cars to Albany, and from there taken by boat to New York. The freight charge was $120 per car, Cincinnati to Buffalo; the total expense, Lexington to New York, $14 per head.

* * *

Q *When did the Pennsylvania Railroad construct its low-grade freight line around Philadelphia?*—Joseph E. Lawrence, 204 West 14th Street, New York 11, N. Y.

A This line was built in 1889-1891, at a cost of $3,142,000, or about $70,000 per mile. The Pennsy experienced such difficulty from congestion in its terminals in and around Philadelphia that this 45-mile cutoff was built from Morrisville across the Delaware from Trenton, to the Philadelphia Division at Glen Loch near Downingtown to get the through-freight trains around the Quaker City, instead of passing through the terminals there. On January 27, 1937, work was started on electrification of the entire low-grade freight line from Morrisville through Columbia to Enola Yard, and April 15, 1938, electrified freight service over the line was inaugurated.

* * *

Q *Please publish something on the Forth Smith & Western Railroad.*—Norman S. West, 709 Ninth Street, Modesto, Calif.

A The coal-hauling Fort Smith & Western Railroad was opened in Oklahoma from Coal Creek to McCurtain 20 miles, December 1, 1901; to Crowder City, 43 miles, August 17, 1902, and the entire line, to Guthrie 196.24, on November 1, 1903. In addition to the main line between Coal Creek and Guthrie there was .92 miles of track at Mile Post, Ark. making a total of 197.16 miles of owned track. Trackage rights were maintained over 19.3 miles of Kansas City Southern line between Fort Smith, Ark. and Coal Creek; 0.8 miles of Santa Fe line at Guthrie, and 32.49 miles of Missouri-Kansas-Texas track between Fallis and Oklahoma City, for a total of 52.59 miles of trackage rights, making 249.75 miles of lines operated. FS&W owned 37.43 miles of sidings. Gage was standard, laid with 70- and 75-pound rail.

The Fort Smith & Western also controlled the St. Louis, El Reno & Western Railway, which ran between Guthrie and El Reno, 42.21 miles plus 4.38 miles of sidings. Extensions of this line were from Guthrie to Peru Junction, Kans. 120 miles, and from El Reno to a point near Hobart, Okla. 75 miles. Gage was standard and rail was 60-pound. Equipment consisted of one locomotive, two passenger cars, one baggage, 2 flats, 1 coal, 2 cabooses. Incorporated on January 5, 1903, in Oklahoma Territory, this road was opened in June, 1904. The FS&W controlled it through 51-percent ownership of the capital stock acquired in 1906.

In August, 1939 the ICC authorized the company, to completely abandon operation of the railroad after an unsteady history. Equipment at the time of abandonment consisted of eleven locomotives; three passenger and three baggage cars, 5 boxcars, 2 flats, 122 coal, 7 cabooses and 6 service cars.

* * *

Q *I'm trying to locate the model of the pontoon bridge my father, Michael Spettel, built for the Milwaukee & Mississippi Railroad in 1857 over the Mississippi River near Prairie du Chien, Wis. Can you help me?*—George F. Spettel, 1305 Portland Avenue, St. Paul 5, Minnesota.

A We're sorry we can't, but perhaps our readers can.

Spettel explains how his father got the

Railway Carmen's Journal

NO EXTRA FARE. The California Zephyr, operated jointly between San Francisco and Chicago by the Western Pacific, the Denver & Rio Grande Western and the Burlington is a reserved-seat, no extra fare train, even to the Vista-Dome chair cars. Scene: Feather River Canyon

Wayne P. Ellis for Rail Photo Service, Boston

PHILADELPHIA, city of railroad bridges. Angling his camera from beneath the Wye Bridge, lensman snapped an Army *Special* taking the old arch span of the Falls Bridge behind a Reading *Pacific*

assignment: The Milwaukee & Mississippi's arrangement with John Lawler at the crossing from Prairie du Chien to McGregor, Iowa had never been entirely satisfactory, especially with the increasing westward traffic. The Lawler system of towing four cars on a barge between two steamboats was too slow, and a pile bridge at the channel did not help, since river traffic had increased. It was evident that some new arrangement would have to be made within the Lawler franchise.

In Lawler's employ at this time was a Bavarian shipbuilder, Michael Spettel, who had come into Lawler's service through the office of Edward H. Brodhead, chief engineer of the Milwaukee & Mississippi. In common with other Lawler workers, Spettel had observed the difficulties connected with the treacherous transfer from pile bridge to barge in the crossing of the Mississippi. Lawler had, in fact, hired Spettel on Brodhead's recommendation for his knowledge of buoyancy and of timbering watercraft. Chief difficulty with the barge-bridge arrangement occurred in mounting and leaving the ends of the barges, the heavy locomotives sinking one end and tilting the other. Spettel's answer to the problem was a pontoon bridge, a model of which he designed and whittled out with a penknife. This model was patented by John Lawler and placed on exhibition at the Chicago World's Fair in 1893, and at the St. Louis Exposition in 1904.

Spettel overcame the rise and fall of the river with a blocking system which enabled attendants to maintain a uniform track level at all times with the shore approaches. Calking was done without train interference by use of a drydock submerged under the pontoon and pumped out so that the men could work underneath. The pontoon was filled again with water to allow a train to pass over. Buoyancy was taken care of 20 feet from the ends of the pontoon, with aprons carrying rails forming part of the pontoon track. The outer ends rested on the pile approaches, reducing submersion by 18 inches even under the crossing of the heaviest trains on the line. Spettel's pontoon bridge could be swung open in less than 2 minutes.

During the two decades in which the pontoon bridge was the property of the Lawler interests, almost a million railroad cars passed over it at a charge of $1 a car, but not long after Lawler's death in 1891 the Chicago, Milwaukee & St. Paul took over the bridge, which is still in operation on the road. The first train passed over this span to the Iowa shore on April 15, 1874. The Milwaukee Road has other pontoon bridges at Marquette, Iowa and Wabasha, Minn.

* * *

ELWIN K. HEATH, of Barre, Vt. and E. E. Russell, 101 Conant Street, Danvers, Mass., both correct data concerning the Boston & Maine 2-10-2s in Information Booth, page 63, August issue.

Instead of 28 *Santa Fe* type engines, the B&M had thirty. They say Nos. 3000-3019 were Class S-1-a, built by Alco in 1920 and Nos. 3020-2029 were Class S-1-b, built by Alco in 1923. Later, some of these engines were rebuilt to the S-1-c Class, weight being redistributed so they might be used on branch lines without having to increase the strength of some bridges.

The ones rebuilt to the S-1-c Class were 3016, 3013, 3001, 3006, 3010, 3019, 3018, 3015, 3003 and 3002 and renumbered to 2900-2909 inclusive, in that order. A bit later the 3011 was rebuilt and renumbered 2920. All B&M *Santa Fes* but the 2920 had tender boosters on their rear tender trucks, adding 13,200 pounds to the tractive effort. The Maine Central bought six of the engines and renumbered them to 651-656. These were Boston & Maine 3000, 3008, 3017, 3009, 3020 and 3029, which became MeC Class A.

Instead of 71,300 pounds tractive effort, the 3000's and 2900s with the exception of No. 2920 had 84,500 pounds tractive effort. No. 2920 had 71,300 pounds tractive effort.

For A Long Time He Worked At Anything He Could Get, For He Knew That Some Day He'd Be An Engineer

I HAD ONLY one youthful ambition and to that aim I held resolutely, despite all setbacks. That aim was to become a locomotive engineer. The idea was germinated in my boyish mind at about age five and was not just a fancy. Why, I don't know. I had no railroading ancestors; my folks were all pioneer mountain stock and the advent of a railroad meant to them only the necessity of moving deeper into the hills.

My dad always had an itching foot and any inclination he ever had to break with primitive ways took an educational or intellectual turn. With all his forceful will, he successfully forestalled every move I made to go into a railroad shop and he was abetted in this by my ailing mother.

JAMES H.
FITZWATER

START TOWARD THE RIGHT SEAT BOX

I could only bide my time until I should reach my majority.

By 1903 I was legally my own boss and I had learned much; I had become close-mouthed, confiding in no one. I wanted a boomer job, one to provide me with a living while I looked the country over. I could become a barber, a tramp printer, or some such, that wouldn't hamper too much my looking. I finally decided to try stenography, easily learned in a short while, at a time when jobs were begging. I headed for Wichita and a Business College, traveling on a stock train, free you know, if I would look out for a car or so of cattle enroute.

Wichita! Gem of western cities, with cool, inviting, shaded streets; clean, well-kept, not too much pavement but well drained, well graded, with good cross walks and a real good streetcar line. The town was wide awake yet leisurely. Its merchants enjoyed a growing and lucrative business throughout the entire southwest. To me, fresh off the wide and wind-swept prairies, even though I love 'em yet, this cool, shady, hospitable town was a paradise. Truly Wichita and my subsequent years of happiness there provided the only rivalry that the iron horse has ever had in my affections.

Well, before I had enrolled for a course in typing in Wichita, a job showed up in a grocery store, so I laid aside my boots and hung up "mi sombrero" I figured a clerk's job would serve for my meal ticket and as soon as I knew the town, I would get a route salesman's wagon and enjoy the outdoors more. I could not be reconciled to being shut in at a desk during this Indian summer weather and a route salesman made good money.

My new boss told me on the second day that it would often be necessary for me to make short delivery trips on a bicycle. The store had one and when I revealed that I didn't know how to ride it the boss said I'd have to learn. I figured a wheel was no more of a devil than a *cayuse*, as I took it out under the quiet elms beside the store to "break it to ride".

Strange to say, I was an immediate success, as soon as I discovered that I was sure to ride into or over anything at which I looked intently. That afternoon the boss said, "You go downtown on an errand and ride the bike. You're plenty good now." Off I went without an untoward incident until, my errand done, I headed back toward the store. There was a brisk wind at my back and I was on a paved street which had just been flushed by the water cart. I was taking it easy behind a farm buggy, when the old couple in the buggy stopped suddenly and the front wheel of my bike jammed under the high, arched axle of the buggy tight enough to hold my wheel upright. Intent on window-shopping, the old folks didn't feel the collision. Of course I fell off, hands and knees on the wet "horse-and-buggy days" pavement. People on the sidewalk began to roar; the old man thought they were ridiculing him and began to shout back, but as for me, I yanked my bike out, saw it was OK, led it around the buggy and mounting as fast as I could, left the place.

A streetcar passed me farther on, and stopping on the far side of the next cross street, let off two passengers, a fat colored woman and a pigtailed pickaninny of about six. The wind made the woman pull down her hat and she started blindly toward me, as the little girl ran to the curb. I couldn't take my eye off that old fat gal and I hit her squarely. Down she sat in the street but she had wind enough left to give me a cussing out as I rode away from my first traffic accident, leaving the little girl screaming at the top of her voice, "You killed my mamma", and the basso profundo of the old woman calling me out of my name.

I was not long in the store until I fell heir to the nice two-horse delivery wagon route. This meant more outdoor work, a spanking team of wiry broncs with lots of pep, and I was fixed for the winter. I learned the town fast. Among my customers was a retired farmer whose kids attended school not far from our store. One very cold morning the kids said, "Mother don't want a thing today except

a postage stamp." She hadn't written the letter when the children left for school, but she wanted it in the mail that day, so —you guessed it—I bundled up on that two-horse open wagon and delivered that stamp one and one-half miles away. The mother said, "Just put it on the bill." The good old days, eh?

Well, I was not long in finding there was no main line rail terminal in Wichita except the Orient, then in financial difficulties, and a small shop of the MoPac. I couldn't hope to live there and railroad; so the following spring I trained another young fellow on the grocery route and took a job as second man on a wholesale territory covering most of the state of Iowa. This was my chance to study the corn belt and see if rail jobs looked good up there. Trees had budded out when we left Wichita but Iowa seemed unaware of winter's impending departure. I contracted a bad cold enroute, and when after such a backward spring as I had never before seen, we had a brisk and heavy snowfall in the second week of May, I just climbed aboard a southbound train. I would have to be shanghaied to work in that country. The winter snowbanks were so high you ran in a cut all the time and the summers were so hot that the rails kinked all over the right-of-way.

Back to Wichita, green trees, spring and all! Again that feeling of coming home, despite the fact that I had as yet no home, there or elsewhere. I was sitting on top of the world, though I had less than a dollar in cash and owed my last employer $10 in advanced wages. I called him up and explained things and told him I'd repay him as soon as I located a job. I went out to the old store and my former boss wanted to know if I wanted my old route. He said the other boy's work was OK and there was no great difference in sales, but if I wanted the route back he would give the other boy notice. Of course, I said no, emphatically. I had voluntarily left the job and if anybody went on the street it would be me. But I propositioned the old man for a cot in the back room and at least breakfast each morning in return for opening up, sweeping out and stocking up the shelves, while I started looking around Wichita for a job to eat on.

I had looked long at Kansas City railroad possibilities and saw what was evident to everybody and what was taking up more and more news space from week to week—the lack of coordination of terminal facilities and lack of flood prevention in K. C. The St. Louis Terminal Railroad Association was being held up to the public as an example of what Kansas City shippers were missing, and the twelve roads in Kansas City were busy promising a newer and better terminal company than even "St. Looie" had, a tall order. I had already been discouraged by the long waiting list for jobs on the St. Louis Terminal. On the other hand, labor conditions at Kansas City were bad. The 1904 flood had left a nine-foot high-water mark in the Union Depot waiting room. The gooseneck outlet toward the river was an almost insurmountable barrier to rail expansion. Each road did it's own terminal work, adding to the congestion, and something was sure to happen soon. So, I watched developments there closely. I soon found a job in Wichita, first with the streetcar company and later at the very best grocery on Douglas Avenue, where I climbed up to top wages. But I was bent on taking a trip to Denver before fall. The streetcar job proved ideal for my purposes, but the thin air of Denver and the tales of heavy winter didn't suit me at all. After a trip to the Wyoming line near Cheyenne, where I wrote off both the Union Pacific and the Chicago & Northwestern as too cold, I set sail for Kansas City, Missouri, and hit 'em up at 15th and Grand Avenue for a streetcar job. I got it the day I arrived. Later I transferred to a carline that hauled most of the shop employes of the Santa Fe, the Q and the Belt Railway and began to get acquainted.

THE FIRST mention of a rail job came not from me, but from a well-dressed, dignified man, who indentified himself as

general auditor of the Kansas City Southern Railway and who invited me to call at his office. I did and was offered a job as train auditor to collect and turn in fares. The gentleman also said some nice things about observing my thorough work in crowded streetcars. I told him the only one that ever collected my fare on a train was a train conductor. When he said the train conductor on the KCS ran the train while the auditor handled the fares, I told him I couldn't enter the mechanical department through such a door, and though I was grateful I must decline to spoil a good hoghead to make a sorry ticket puncher. I later asked a passenger conductor of the KCS about this train auditor business and was told that such was indeed the case. He also said the poor auditor had no permanent assignment but was moved without notice.

THIS brings to mind the old subject of road vs. terminal preference. Most men say that the monotony of yard drilling makes such work distasteful, but what mainline hogger, with 25 years or more seniority, cannot close his eyes and tell accurately where his train is, orienting himself by the peculiar click of rail joint, crossing, switch frog, or the rumble of culvert or trestle. How many nights has he not blasted ahead through dense fog with no other pilot than his intimate familiarity with the monotony of his territory. As for me, I'll use the "radar" of my mind's eye every time. The most effective argument for road work is, of course, the pay, but even that has it's weak points, for expenses away from home are often big enough to collapse the budget. A man can't eat as well away from his home, nor rest as well, and as we are ordinary men, we may gamble or drink too much. Too, trains always leave or arrive at some appallingly unreasonable hour. On a bitter cold night the caller wakes you at 1:45 a.m. to sign the book for departure at 3:30 a.m. That means be on the engine at 3:00 a.m., a drag of 150 or so miles in from five to thirteen hours, depending on the weather, traffic and the train "delayer"; about nine or maybe ten hours at the other end, then another drag home. There are two perfectly good warm beds deserted, not a single meal, not even breakfast at a decent hour, and brother a stretch of mainline back and forth can get mighty monotonous too. The terminal engineer has an assigned starting time, a fairly regular time to end his day or night, a fixed meal period for the only meal each day away from his own table. He sleeps in his own bed, stays acquainted with his family, draws road pay for all work train wrecker or transfer service. He can't be started to work between 12 midnight and 6 a.m., except in an emergency or to save perishable cargo, and his meal period is to be given before the expiration of six hours.

Of course I did not find all these rules in effect when I got my first job, but the two engine service unions were growing, the men were cooperating and when I left that job these and many more advantages were effective. I am thankful I was privileged to do my part.

So the branch lines and outlying jobs helped me to decide in favor of terminal work. I was not through looking around, though. Getting a leave of absence from my streetcar job, three of us, armed with service letters, went to the Pacific Coast. We had no difficulty in getting jobs on the Pacific Electric as conductors, but I wanted the head end and was not willing to wait to gain the experience in high speed operation necessary to move to motorman from conductor. So in November, 1906, I went back to Kansas City and the Metropolitan Street Railway.

The next spring I got married. I had not admitted it but the trip to Los Angeles was the only time I ever got homesick. The Terminal Company was still on paper. Rights-of-way, etc., were quietly being acquired, so I strengthened my old friendships, made some new friends and waited. I contracted to buy a house, moved in and we welcomed a cute little girl and boy—yessir, twins, which my inlaws predicted would keep me on the streetcar line permanently.

As everyone knew, Shorty was the best engineer on the road, so I let him do the talking

Being well known to the patrons of that carline, I acquired some local notoriety and to my surprise was offered a job in the local yard of the Burlington as fireman. There was separate seniority on the "Q"; no yard work for road men and vice versa. I thought it over for a couple of nights and turned it down; I didn't even tell my wife. The man got kinda sore when I said no, but I didn't say a word about the Terminal job. I had an idea that a good Terminal Company with their own shop and car facilities would sorta crimp the style of the local boys in the Burlington yards and I, as a "Q" yard man, would be out, if and when the slump hit.

In 1908 and through the winter and spring of 1909 buildings were moved or demolished and final plans were announced. The depot site was made public and the Terminal Company created, absorbing the Kansas City Belt Line Railway only. It was to be held in equal shares by the twelve railroad companies entering that area. It was said that trackage changes, repairs, betterments, yard, shop and freight house facilities would cost approximately 45 million dollars and a new union station, centrally located out of flood danger, would be built, costing about nine million dollars. Well, now it was time for me to light; I made up my mind I would grow with the depot and stay until fate called the turn.

I had decided to ask Engineer W. E. "Shorty" Holman of the old Kansas City Belt Railway to go with me to the master mechanic's office to seek a job as fireman on the new Terminal. It was a wise choice; he was glad to do it and did the asking, too. He was the sort of man that others listened to willingly. This was my red letter day. All prior events in my life pointed up to this occasion, and it seemed to me that my entire future hinged upon the outcome of this interview. Shorty was welcomed and we were seated; I can see him, sitting squarely in a big arm chair, his hands, palms down, at the front edge of the seat, fingers slid under his knees and boots failing to reach the floor by four or five inches. He swung his feet in a boyish, natural way as he chatted with the boss. I learned to know that such a pose was an indication that everything was under Shorty's control.

IN HIS easy drawl Shorty began, "This lad wants a job as fireman, boss; he thinks he'd like to work for you and the new company. I'd take it as a favor if you could find a place for him." The official turned his gaze on me and for once I was not worried about my small size, for I was larger than Shorty. The boss asked my age and when I said, "27 years," there was no comment, though I looked to be about 20. When asked what experience I had had, Shorty took the ball again. "None, Boss. He has no 'letter' but I will vouch for him. He is a good fireman and don't use liquor at all; he will make you a good man." So the man said, "All right, as soon as I start putting on men I'll call you." The chief clerk was not in the office so I had to be satisfied with that.

When two weeks had gone by I got restless. I laid off the streetcar job one day and went down to the Belt Line roundhouse and had a talk with the master mechanic. I made it clear that I was not going to be a pest, but inasmuch as I had to qualify it seemed a good idea to do that before the Christmas rush started. The coal rush was now on and as I told the man, I wanted to qualify, make my seniority date, then he could cut me off the fireman's board till I was needed next spring. The boss agreed to do this, so that afternoon I filled out my application, passed the doctor and got a letter to qualify.

The next morning I presented myself as a student fireman to the engineer on the largest engine and the heaviest run on the property. The night of the sixth day of this schooling job, the engineer OK'd me and the next morning I was called for my first pay trip. That was the day I had to make, or all the planning, scheming and hard work would be to no avail. But I did no celebrating yet and it was well that I didn't, for my jinx was not through with me. All that last day on my student trip, a blizzard raged. I had to walk five long blocks from the end of the car line to my home. I carried a tin dinner pail on the top of which was inverted a drinking cup, forming a sort of dome on the top of the pail. When almost home I slipped on some snow-covered ice and fell heavily on this dinner pail and the cup cracked two ribs on my left side. The pain was terriffic for a while, but I managed to get home, take a bath and get to bed. I was so tired I slept soundly and did not tell my wife a word about the fall. I had had broken ribs before, on the cattle range, and I concluded there was nothing to worry about. But, if I failed to pass the test—well such a failure was unthinkable.

NEXT MORNING I tied a scarf bandage about me and caught a streetcar for work. I was called for a different engine and job but drew the same engineer who had qualified me and we began the day. I said nothing about my fall or my side. The blizzard howled—boy was it cold! We kept the cab curtain down and every time I put in a fire I had to roll up the curtain. That fact, and the pain of movement made me starve the fire more than a new man usually does and thus the coal was burned more completely and I had plenty of steam. Better still, the fire was thin and not clinkered and the engineer was greatly pleased that the grate did not need to be cleaned at noon. But I was the guy who was pleased. The tough job of cleaning clinkers out of a bad fire would have well-nigh killed me that day. The day dragged on till we had made 14 hours and 30 minutes in that storm. When we finished and put away the engine I was notified that I was on the firemans' list as of that date, December 5, 1909, and because of slack business, laid off until notified to report again.

Well, what a load of expectancy, uncertainty and fear was lifted by that day's work. What odds that the pain in my side was bad, that I had a high fever, that every breath of that cold air seemed like knives in my lungs, that I had five long blocks to the streetcar from the shop and five more from the end of the car line to my home. I could go get my side bandaged now and need not lay off on that account. I even had a streetcar job through the winter and spring while I waited for construction of the Terminal Company to begin. Well, the doc laid me up for eleven days; I had a severe attack of pleurisy, but I also had the job I wanted.

When I was able, I reported back to the streetcar job where I worked steadily until called back to the fireman's board in June 1910. I was not cut off again. In fact, after about thirty days on the extra board, I fell heir to a regular engine on a day assignment.

It had not been long since firemen were assigned according to the wishes of the engineers; their seniority was in name only and even my first two markups were done without consulting me. However, I was very new and I was no Horatio Alger either, so I kept still.

In those days lots of liquor was used, but I was a teetotaler because years before I had pledged to my mother that I would not taste it. When one of the engineers (who thought he was a pet) told me to go up an alley to a nearby saloon and get a quart, I flatly refused. I told him I didn't care what he did but I wouldn't buy or tote liquor for anybody. Well, it rapidly spread about that I was not to be trusted. Soon I was assigned to fire for a nice sort of fellow but no great success as an engineer. He had complained about another fireman and they had a row so I was marked up with him; I wondered why and he told me he had asked for me. He may have but I learned that his former fireman had requested a change.

After a few weeks on this job I found myself moved again, this time assigned with the man who had asked me at one time to go get him a bottle. Man! but he was mad; he just knew a trap was being laid for him. His other fireman, a big, good-natured Irishman, didn't yet trust me either but he told me later that the change was made at his request for he just couldn't afford to keep that 'hogger' in liquor any longer. Well, I had a hard time for a while, burned at least three tons more coal daily than I should have, but at last one day the engineer overstepped and slipped the engine so much on a slippery spur that he got in bad with everybody. He took nearly all the fire off the grates and we stopped at a pile of crossing planks to build a new one. The work stoppage, the burning of the roadway crossing planks, the burnt rails and lost driving tire shims earned for him a bad session in the general yardmaster's office and I didn't have to even open my mouth. Not a great while later I bid in a job I wanted and was never again marked up except as I requested. When it was observed that I was never around the

office and that I kept my mouth shut, the distrust soon vanished.

In 1910 the steam shovels had not begun to throw dirt and my first job when recalled was that of engine watchman. At the roundhouse I met a newly hired engineer who was working as hostler; he was an elderly man from the Missouri Pacific and had seen lots of mainline service. He no doubt was glad to be employed again but seemed to be irked with such menial tasks as hostling. Anyhow, one time when he got up to move his engine as I was filling the boiler, I asked him where he would put her, but he made no reply. After he had gone some distance the tone of my injector (of the lifting type) changed and the water began to go on the ground. I started to shut it off but the hogger ordered me to let it alone. I did that and when he stopped he reached over and shut off the injector, then noticed the water on the ground. He started to bawl me out but I told him the injector had broken before he told me to leave it alone. He gave me a dirty look and got down. I thought I'd made an enemy but no sir, he later proved to be one of my fastest friends.

I FELL INTO place on the big job now in progress. I stayed away from the office and I was not noticed by the boss except once, when I went into the shop one night with a badly battered boiler check which had stuck open. The damage had been done by a machinist who was riding home with us after repairing a steam shovel. I protested his pounding the check so hard, but he ruined it. When he learned I was called into the office about it, he told the general foreman he was the guilty one.

You could not depend on an enginner helping that way when one got into trouble. They were roughly divided into two classes—yesmen, or pets, and mice. I mean by mice, those who wanted to keep out of sight when an investigation loomed up and just wouldn't take a stand. Most of them had been out of work a long time and now figured to keep their last job, so they had little to offer the other fellow. Of the pets, three or four were notorious. Of course, there were exceptions, men of sterling worth who went to their reward, crowned with honor and respect. I have no grudge against any of my associates. Enemies are a necessary evil; the man who has none is a nobody. But they are all dead and gone, and I wish it were not so. I will relate a few incidents to illustrate the rocky road to promotion.

Some time in 1910 a road foreman of engines was appointed; he turned out to be the man who broke me in as fireman. He was a good choice but for some reason left us soon after completion of the station. My first experience with him was indirect. He was, of course, the contact man between the men and the office and we saw little of the master mechanic after this job was created and filled. One day the road foreman of engines showed up on the job I was on and had a private chat with my hogger, then left. My hogger said he had inquired closely about my performance and cautioned him to report any fault that showed up in me, saying that I had been turned in as being too light for the work. I had been on this job (spotting cars at a steam shovel) for several weeks and knew the charge was baseless, so I suspected the fellow who had been so mad when I was marked up with him. I accused him, after we were off duty, and he confessed that he had told the master mechanic I was too light, when he was trying to get the Irishman back. He apologized profusely, said he had misjudged me and now knew he was wrong, so I accepted the explanation and put it down against the road foreman who was trying to impress my present engineer with his power.

Some time later two of the new Baldwin switchers arrived; they were dandy engines. They were the best switchers in that Territory, in fact, the twelve small-to-medium six-wheel switchers and the two large eight-wheel engines (all Baldwins) turned over by the Kansas City Belt Railway were all good and in excellent shape. I can't give you accurate speci-

fications at this late date but all the early ones mentioned, I think, had 19 or 20x26 cylinders, piston valves and 50 or 51-inch driving wheels. The two big ones built for pusher service over the big hill had about 25x32 cylinders, piston valves, and fairly high drivers. The first six of the new terminal engines had a 51-inch wheel, cylinders about 22x28, piston valves and dynamos. They were our first electrically lighted engines. They carried 200 pounds of steam and you could pop one by shaking the scoop in the firedoor.

There were some engineers who complained that oil headlights gave better light, and strange as it may sound they were right, for while road engines had arc lights, yard engines had to use incandescent cab bulbs in the headlights at first and they just woudn't do. But we soon got better and bigger bulbs. In the meantime the two new engines were assigned to two of the older men who were "pets." When bad winter weather slowed up the construction work, I had to hunt a new assignment so I asked the road foreman to mark me up on one of the new engines as both of those firemen were younger than I. To my surprise he advised me not to make that move. I said, "Why? Are you still toting around the idea that I can't deliver? You are making strong talk to me when you try to bar me off a job. I'll have to see if you can convince the super." He replied that he had no complaint about my work but he was warning me to expect trouble on the job I wanted, for those two engineers liked the fireman they had and would get anybody run off that displaced either of them. I told him I was glad he had told me about this and that I would expect him to quickly stop any such action against me if it materialized. I told him to mark me up as I had asked, rolling the younger of these two men.

I went on the job the next day and things were sort of rough that morning. We were to leave the shop promptly at 6:30 a.m. after going on duty at 6. The fireman must draw all supplies in those days and fill the lubricator before leaving. To do this I needed light. I had read up on dynamos, etc. but to be sure, I hunted up the shop electrician and had him watch me start the dynamo. This didn't do me any harm when it came to the shop foreman's attention. After I did my work, I took the feed can and rod cup wrench and got her ready for the engineer who came on the run about 6.31 a.m. with his overalls rolled under his arm. He didn't even grunt a "howdy." I said, "We're all ready to go." The switchmen were waving him back, but he took time to close and reopen the dynamo throttle, then as we began to move out he growled at me, "Who started that dynamo?" "I did," said I. "Well, after this keep your hands off it. You don't know anything about 'em." Well, I boiled over then. "This engine's got Kansas City Terminal Railway painted on both sides." I said. "I don't see your name on her or on the timecard. I get here on time and I do my work with all the light I can get. I don't propose to smoke up this clean cab with a torch and if you want to start that dynamo you had better be the first one here. Furthermore, you get your own work done the best you can tomorrow—I've put my last squirt of oil on the running gear for you." I said no more and neither did he. But she was such a sweet job, that engine—air fire door, too—that I couldn't stay mad long. About 9 a.m. we drifted down a hill. I got my plumbago can and stirred up some valve oil and graphite. Giving the engineer a sign of my intention I went out to the front end and gave her a shot through the relief valves. When I returned to my seat the hogger called me over to say he was glad I had come on the job and to forget what he had said. So was healed another misconception.

Sometime later we changed over to oil. At that time I had an industry job on the long hill, or the eastern slope of the big hill. This was the worst grade in that entire area. I never knew the exact gradient, but at any rate the medium-size six-wheel switcher did well to haul twelve boxcars of the 1912 type over it and then was short on water to tip over the top.

The larger six-wheelers could handle eighteen or twenty cars. The grade was not so bad, westbound, but there was a much longer hill on the east side, five or six miles long.

Well, I had the last coal burner before conversion to oil was completed. The Santa Fe had oil west of Argentine and oil on all yard engines. Our boss mailed all of us a form letter to be signed by our respective engineers, showing that each fireman had put in an entire day on an oil-burning engine to learn how to handle that fuel. Of course this would cost each fireman a day's work, and at $2.50 for ten hours, it was hard to take. But I laid off a day and put it in from start to stop with the older of the two pets. There was an extra engineer on duty that day, and I, dumb as usual, had left my letter at home. The engineer said he would sign it later, but the poor fellow was carried to the hospital the next day and there he died. Well, the pet of course wouldn't sign it because he was off that day. His fireman was a witness that I had taken the test, but there was no place for him to sign. The master mechanic was out of town. The general foreman said it was OK—he knew I had put in the day and said to forget it. Not so the road foreman. He said I'd have to put in another day. Well, that was early in the conversion period; only three or four engines had oil and they weren't doing good, so I waited till they should get the bugs ironed out, which they didn't.

IN THE MEANTIME I studied oil burners. I read everything I could get on them and rode a while every few days with the crew on the Santa Fe pusher, over our hill. Our engines had the right type of burner for the long narrow type of firebox, but they were not being properly installed. It seemed that our pipefitters and boilermakers thought that oil was so combustible that just pipeing it into the firebox was sufficient. Nobody took the pains to make all the air that was drawn into the firebox mix thoroughly with the flame before it entered the flues. That was the secret. Cold air entered next the sheets behind the brick and the flues and so kept down steam pressure. Also, the flame dragged on the flame bed and formed carbon piles which deflected the flame up above the flashwall and was drawn out by the exhaust in the form of dense smoke. Well, as I said, I still had a coal burner and was doing OK.

Then the blow fell. Our coal burner was taken into the shop and an oil burner was set out for us. My engineer had no idea how to fire oil so he had a bad case of the jitters. This was the day my friend, The Traveling Grunt, was waiting for. Well, I was on time and sure enough there was a pile of hard carbon on the flame bed and the oil blaze could not be forced more than half-way back to the flash wall, over the air inlet. The result was that the air and flame could not mix. I went to the shop for a long chisel bar. I intended to clean off that carbon, if I could. When I got back with the bar, there was my friend. He informed me I was out of service for the day and was sentenced to put in the whole day as a student. I laid down the chisel bar. He announced that he was going to go along to see that I didn't go home. Well, I rode along, so did he and the engine fell down on the hill. All the chickens along the road went back to roost—the smoke was that black. I let the extra man fight it out. The T. G. said he would give anything to know what was wrong with all our oilburners and that this was the worst of the lot. When we cleared the main line, I told him what the trouble was and proved it by throwing sand through the air holes and showing him the oil-blackened back and side sheets. He made copious notes, told my engineer to report everything I told him, told me to go on home and he himself went back to the shop.

Next day they set out our old coal hog while the shop force went to work on the oil burner.

The following day there was the oil burner, but different. The burner was adjusted, the firebox sealed except for the dampers, and there was no carbon in

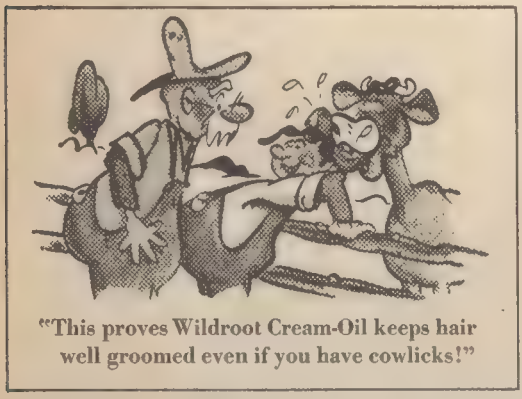
the way. There was my friend too, but I had an extra engineer. My man had laid off, for he didn't believe I knew what I was talking about and he didn't want to get mixed up in another engine failure. The T. G. said, "Get her good and hot before we start now. Let her pop plenty." I did and the master mechanic came out and bawled me out for popping the engine.

The road foreman had the bright idea of adding 3 extra loads that a.m. It seemed he was determined to show me up, but we coupled on at the foot of the hill at the Frisco crossing and started off. The drag was heavy, but the extra engineer was a good man and the work on the firebox had been well done. We went over that hill at better speed than anyone else had done, with never more than a gray haze at the stack and the injector singing.

In the middle of the hardest pull my friend said, "You can give her more oil than that." I said, "What's the use of wasting it? You have plenty of steam and water." Over the hill and in the clear, what do you think he said? "Well, I've seen enough. *I've* got this one to steaming. If they will let me alone I'll make 'em all steam." And back to town he went on a streetcar, taking all credit with him. But I was well repaid. The boss let us keep that engine as long as I stayed on the job. He put on a sliding back curtain, later to be made standard, linoleum on the deck, and we lived easy.

And the rest of the engines were also improved. What price glory anyhow? My regular engineer came back the next day and I rated higher with him afterwards.

There were two phases of this stupendous construction job which I have not yet mentioned. The first was the immense sewer which was constructed from the middle of the city westward to the Kaw River through the OK Creek Valley. The Creek had been an open sewer from where it first touched the K.C. Belt right-of-way, and had an immense drainage area. It passed right through the location of the new station. It was deepened



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REAMER KELLER

materially, two full basement stories being built over it and from the station to the river it was enclosed in a tremendous sewer down which about three ten-ton trucks could be driven abreast. It was square and made of concrete.

The other phase had to do with the utilization of the enormous amount of native stone taken from the station site, the deepened cut through the big hill and other projects. Rock crushers were constructed at several strategic points, the rock dynamited and crushed for ballast and concrete mixing. Great mixers made concrete which was poured into reinforced forms, making slabs, piers, piling, columns, sewer pipe, for underpasses, viaducts, etc., some so large that special arrangements had to be made to transport them. All kinds of special forms and fittings were poured. Most of this work was done in Blue River Yard, and continued long after the depot was opened. Retaining walls of more than 40 feet in height were faced and poured. This made plenty of work for switchmen and engine crews. All of our track was rock ballast about 12 inches, I think, on top of at least that much river sand. We got 131-pound steel and oak ties. A road built to last.

But it was some time after the opening of the new depot before anyone could trust the tower men not to tamper with a switch while a movement was being made over it. Oh yes, I know they'll tell you a switch can't be moved when being passed over, but when an engine is turned over, under you, by the switch being thrown between the back drivers and the leading tank wheels, you're not inclined to listen to such patter.

That happened to Mr. Quigg and me one sunny morning. Fortunately, the switch frog ahead of the switch was turned up and so wedged under the front of the engine cylinder that it did not skid any further nor fall on its side and so neither of us was injured. Lucky for us because that was a sorry place to jump, with tracks, switches and rock all around. The dwarf signal was still at proceed even after the track was torn up. I stepped between the signal and the tower man as he came running and shouting, "You ran the board". Then I stepped aside and asked him why it was still at "proceed". That stopped him. Another time I had the pay car and was standing in the plant. I heard the air blow under the cab and a switch we were straddling flopped over so that if I moved I would either derail or damage it.

MUCH LATER ON, because of a terrible mistake, I had murder in my heart for a certain engineer. We were on the main line and came to a piece of single track under construction, over which operation was controlled by "staff." As we waited, this engineer began to oil around. The front firebox damper had been left open in the shop, so I took a hammer and telling the engineer not to move till he knew I was out again, I went under the engine. Before I got out, the signal was given to come ahead. To my surprise our whistle sounded, the air released and we started to move. My yells could not be heard over the noise of the train ahead. But there was a gang of track workers beside us, and thank God they heard me and got the engine stopped. When I was sure it was safe I crawled out and started up in the cab. I meant to work that engineer over with the hammer for forgetting me, but he was climbing up from the other side. Somebody from the engineer's seat behind me commenced to hug and paw over me and was actually crying. It was the yard foreman who had, contrary to all rules, started the engine without a thought to the location of the engine crew. He never as long as he lived touched another engine throttle. The engineer? Well, he had thought I had started to move the train myself. I didn't hit anyone.

I kept hearing so much about the Old Man not liking me that I began to believe he would not promote me, so I studied all the harder and was promoted in my turn with a very creditable grade.

Up to my promotion on November 1st,

1914, I had no actual air brake experience. Few firemen were trusted to handle automatic brakes and my only attempt was cut short when I returned the brake valve to running position instead of lap, while attempting to check speed on a steep, short grade. Of course, I learned right there, but lost my chance to try again. I had the theoretical knowledge, however, and finally, just before the date for exams, it was the engineer who had stripped the fire off my grates who gave me a chance to get the feel of braking on the hill.

My first day as engineer was made on the same Engine 10 that I had fired as a student. And on the same transfer job. I had been elected "griever" for the firemen and began to see more of our master mechanic. He of course wanted to chisel the contract as much as he could, but finding us a stubborn lot our common ground was mostly a battleground.

However, we were both fair and neither side suffered for want of friendship. The brass usually maintained an air of aloofness from the rank and file, but I got one of the sincerest compliments from this man, after I had left the service of that company, that I have ever received. On learning one day that a pensioned engineer from another road planned to visit my town, my former boss charged him to look me up, saying, "Jim and I never saw eye to eye, but he will not lie, he will tell the truth to his hurt."

The day on which I first saw my name on the engineer's list, the first actual consummation of the desire of my heart, was celebrated by me alone. There were no loving congratulations from my Dad and Mom, no cake or fatted calf set out on my own table, not even an extra kiss on my departure from my threshold that morning. But actually I didn't miss 'em. I had the profound satisfaction of attaining my goal, plus the determination to stay there. The first day was a bust—we were blocked all day west of the Kaw River bridge because of congestion of passenger traffic at the opening of the new depot, and finally shoved our train back into the Armourdale yard for a ten-hour day standing still. But happily the next day brought an improvement at the depot and all departments functioned more smoothly. The populace of Kansas City awoke to the fact that they had a beautiful union station and truly an efficient Terminal Railway Company.

Often during those earlier days at the throttle I heartily wished I was again the fireman and the weight of responsibility was on another's shoulders. There was the night in the Rock Island yard when I misread the position of a switch and butted through a crossover into the side of a standing train. Scarcely any damage was done, but an assistant yardmaster of the Rock Island was riding on the other end of my engine so I got a 10-day's suspension. All my crew was in the cab, I had only cab light bulbs for headlights and couldn't see the rail points, but none of these facts afforded a plausible excuse. I learned one unforgettable rule from that night, which I never again violated. It was this: If you can't see, don't go. A handy rule in congested areas. In vain I had pleaded that the reading of the switch light (which was green when lined for the crossover) was misleading. The Rock Island brass said that condition was covered by special instruction and bulletined. But after that we got copies of such bulletins at our shop.

Another cold, blowy, snowy, morning I was headed over the hill with a heavy drag from my old long hill job. Approaching the tower east of the depot, where we would cross the westbound passenger main, the board was red. I tried a grandstand stop but the brakes on the whole train were cold and slow, and I got too anxious when I saw I was going to go by the board. Actually no harm would have been done. There was lots of room beyond the board, and the fact that I got by would not have registered in the tower, anyhow. The tower man could not see this board because of a viaduct. Yet, I, with brakes fully set, pulled back the reverse and opened the throttle sometime before I reached the board. Of course, I made a sled out of her and when I started off

after I got the board, I almost got down right there to start walking home talking to myself.

The gaps in those tires were appalling. The noise that this comparatively new engine made on that 131-pound steel rail was louder in my ears than the rap of her exhaust up that hill through those deep rock cuts. This was no ordinary crime. I do know that if the Old Man or the road foreman had found me out, I would have been fired. But luckily for me the engineer I was relieving was off for two weeks. In those days the extra men were not pooled, I was to keep that job till he returned to work. So taking advantage of the remoteness of some industry coal tracks, after talking it over with my crew, I proceeded to grind out those flat spots by judiciously slipping the drivers on sparingly used sand dropped on the long reverse curve this coal yard. The engine was housed at night at the Armourdale shop, a few miles from the office, so I never heard a word about the tires.

Well, negotiating these and many more such steps in my education I progressed after a fashion. I had surprisingly little trouble with the ground crews when one remembers that they were largely made up of boomers. Some time the next year I was cut off the engineers' board and so returned to a fireman's job. I wasn't through with the left side yet.

About this time the two labor organizations were working as a joint committee and at the culmination of a joint wage movement in Chicago, the decision of a board of arbitrators was handed down. Among other things, through freight, rates according to class of engine used, were awarded in yards and terminals for transfer work and all wrecker and work train engines. The burden of designation of this service on individual properties was referred back to the several managements and their men for adjustment. All the roads owning the Terminal Company of Kansas City settled these matters with their men on an equitable basis, but our own management would not recognize our claim to any such service. Finally assistance was requested of our Grand Union heads, but those representatives found our superintendent, an easterner, to be adamant. A strike vote was taken.

THINGS LOOKED bad for us. Finally I suggested a simple scheme to notify the board of directors—they were the operating officers of parent lines—of impending trouble, by wiring them to have their own engine crews warned to maintain a hands off policy, in case we struck. That did the trick. This superintendent was bombarded with inquiries and ordered to settle forthwith and 48 hours later the office of superintendent was vacant. The efficiency expert filled in as acting superintendent for a while, but soon he too was gone.

Our new agreement was OK and soon we were privileged to welcome two of the finest of operating officials, Mr. Corbett, President, and Mr. Hill, Superintendent. In fact, we had three, for Mr. Williams came to us as General Yardmaster.

About a year previously we had somehow lost the R F of E, and the post was ably filled from the ranks by the appointment of Mr. Quigg, a man of the finest qualities. He was very ably assisted by another sterling character, Mr. Shipley. Mr. New was the able Master Mechanic, and with these men in charge, the K. C. Terminal Railway really began to function. With the depot and trackage expansion completed, the steam shovel and work trains faded into memory and without any conspicuous fanfare, the passenger work began to take on a faster tempo.

This was due entirely to the men's willing response to fair and efficient management and trust. The Kansas City Terminal Railway soon had an enviable reputation as the fastest passenger interchange terminal in the nation. All movement of occupied cars and of more than two empty cars had a tail hose coupled on the end opposite the engine in charge of a capable switchman whose duty it was to control all shoving movements with the air brakes, bringing the cut to a full stop about a car length before making a coupling. The tail

hose was then removed and the joint completed with signals to the engine. Strict enforcement of this practical method soon brought about an era of efficiency and safety unequaled elsewhere.

Speed was essential, for by that time, with shorter trains, the timecard showed a total of 235 regular passenger trains in and out of the station every 24 hours. From 2:30 a.m. to 7:30 a.m. there were usually no trains.

I have mentioned certain officials by name because they deserve much credit and because they were loved and respected by us all. Well, to be honest, I didn't love Mr. New much then. But I wish I could atone by telling his good traits now. He had one fault which was always apparent and which I will touch on later. He had good power and kept it up. He had a hard job and kept it up. He had good men and bad but he kept them working. Discipline was not lax; but there were very few cases of dismissal and these were mostly for Rule "G". He was not influenced by tattling or flattery nearly as much as we younger men supposed. Any man who accomplishes so much in his lifetime of work for one company and holds his outstanding faults down to "one," has a record in my book.

Now to get on with the tale. When I was cut off the engineers board I took the "east end" engine, working eleven hours daily at the east end of the station, and the engine, being an oil burner, stayed on the job day and night. We went to the shop for fuel and supplies each afternoon. The night crew worked 12 hours. I was griever for the firemen and our contract called for all supplies—fuel and sand—to be placed on the engine by the roundhouse crew. One day at the shop I was told I would have to fill the fuel tank (a very nasty job). I was told it was the master mechanic's orders; but there was no bulletin. I'm sure now that it was the R. F. of E's scheme (my pal was still with us). I filled the tank that day, but handed in a letter to the Old Man, signed as chairman, protesting in vigorous language this demand on the fireman and putting his office on notice that I would not again fill a fuel tank. The road foreman tried to get me to pull the letter down but I wouldn't and some years later was glad that I didn't. After Mr. Quigg was made R. F. of E. and during the reign of the efficiency expert, Mr. Quigg was cut off for a while and he came back on the East End job as engineer. An oil burner makes a sleepy job and after the rush of the mornings, the relaxing trip to the yard and shop would make me drowsy. He had a remedy for that. He had been kindly in manner till all at once as I sat on the left seatbox nodding, as anyone who looked at us go by could see, he spoke sharply, I may say thunderously, "Wake up. Do your sleeping at home or get off the job." Well, I was high tempered. To be spoken to that way made me so mad that I was instantly wide awake. I looked at him, stern and silent now but capable as I knew of causing me to lose my job, then I looked out the window and saw the efficiency man, on my side of the track, waiting to hop on the engine.

Well, of course the engineer had seen him first. That changed things. I meekly tried to lay the drowse on the oil fumes. "Your nodding days are over, if you stay on this job," said he. I got mad all over again and looking out the window I saw the efficiency expert decorating the back footboard, big as big. He had on a nice grey suit and as we neared a red board he dug out his watch. The engine stopped with brakes still applied. I glanced at my engineer's straight face, then looked back out in time to see the water from the freshly filled tank surge out the manhole and wash his nibs, grey suit, watch and all, from the rear footboard.

I looked back at the engineer whose dour Scotch frown had disappeared. That rough stop had been on purpose. The switchman had sidestepped but his nibs had not known about that. He very properly put all the blame on the tower for holding the board red. We both had a lot of laughs over that, and I never got sleepy again on that job.

Soon Mr. Quigg was re-appointed R. F.

of E. and I grew tired of that depot job and went back to the long hill. I had a grand old fellow for engineer but he was one who would not take a stand. Once when we had to make an extra hard shove, we were not far from the roundhouse office. He failed at first, so he told me to give him more steam. He was a relic of the day when they would shove a brake shoe key in the old fashioned pop valve to get over a bad hill on the MOPac where he was made.

I had the 21, the engine I had got repaired, and the pop had lifted as soon as he had stalled; but he wanted 10 pounds more steam. I told him I could do it by firing against both pops, but the Old Man would get right on us. This engineer said, "You give me the pressure. That's an order. I'll tell the boss I ordered you to do it." Sure enough, I put 210 pounds on the gage, raised both pops and he put the cars where they belonged. When we got back to the switch, there was the Old Man waiting on my side of the track. He really took my hide off for what he called a disgraceful stunt, and it was just that. That engineer never opened his mouth, but let me take it all. But the Old Man insisted that I give him a reason, so I told him the engineer had wanted it. So the boss reared back and bellowed, "I don't care what blankety blank engineer orders such crazy stuff, you're fired the next time you lift both pops. I think now he knew all the time who made me do it. Another time with this same man, our engine's petticoat pipe came down on a hard pull. The engineer was riding next to the masonry wall of a deep cut. The cab was filled with steam and smoke before I could shut off the oil, but then everything cleared up and the exhaust sounded normal again. He had not closed the throttle so I gave her the oil, the fire lit off and we kept going and behold the engine got hot quick, without smoke, too. The engineer sputtered around and said, "What you doing over there? Trying to make a ham out of me?" "No," I said, "the petticoat pipe came down." "No such thing," said he. "That would have killed her."

BUT IT HAD come down and here was the solution. This was engine 25, instead of the 21, and was not a free steamer. When the engines were converted to oil, everything except the exhaust stand and petticoat was removed from the front end. The petticoat in this engine was suspended crookedly and the exhaust did not fill the stack. A hole was worn through one side of the petticoat by the exhaust and finally the pipe fell down. That smoked up the cab but there being nothing to hinder, it settled lengthwise below and to one side of the nozzle and the exhaust again filled the stack and the steaming quality was restored. When we pulled in the clear I cut down the fire, knocked off both ear plates, and aided by sunlight down the stack, we could plainly see what had happened. I had begged this man to report this engine failing for steam but when a foreman had told him the front end was line and line, and that the fault was with the fireman he had shut up and he wouldn't report it again. I had a hard time convincing him he didn't or shouldn't know a thing about what had now happened, but finally he agreed not to report this. But the night before the boiler wash, he did report it, and a new pipe was made and put up using the same brackets and holes and the engine came back to us the same hard steamer.

And he wouldn't say a word. But I liked him. He was just plain scared. He was a mainline man and would never never be a safe yard man. He would like as not release the engine brake while the switchman was coupling the air hose. Of course, the engine wouldn't move much, but it would move and out would come the switchman cussing a blue streak and I'd have to make peace again. There was lots of rough handling in freight yards. Draft gear was badly mauled, but somehow the cars we handled always held together till we got on the main, where at some comparatively light jerk, out would come a lung, draft gear and all. I got a notebook and would slip down the left side to the break-in-two and get all the dope I could on the bad condition of the car before the

failure. Now when my engineer got his letter I helped him answer it and by golly it worked fine.

Well, we had not had the 25 long till she busted a flue and I got the 21 back. Soon I went on the transfer job again firing Engine 11, an eight wheeler, for the lad who had stripped my grates. Engin 11 was bad about foaming and the blow-off cocks could not be used when the engine was moving because the driving gear fouled them. The gage cocks were tapped through the bend where the back head joined the side sheet, a very unsafe location with a dirty boiler. This of course was later corrected, but on this day we had no choice but to properly blow the boiler and she began to foam as soon as we left Sheffield, westbound. This was a long hill and this engineer did not ease off as the water began to drop in the glass (which was correctly located). Allowing for the foaming, when the water got low enough I started my injector. "Shut it off," yelled the hogger. "I got too much water now. You had the boiler too full at the start." I said, "The water is going out of sight." He said, "I've got two solid gages and a flutter in the top one." He made an issue of it, so I shut off the injector and quietly shut off the fire also. I tried to convince him that the water was circulating up the bend of the boilerhead and that we could not possibly have that much water in a foaming boiler, but he kept showing me a solid bottom gage and wet steam in the others, until we stalled for steam. He had not noticed that the fire was out.

When he slammed shut the throttle and got ready to really give me what for, I calmly asked him how many gages of water he had now. When he grabbed the bottom gage cock and the dry steam whistled out, his jaw dropped. I opened the drain of the water glass and got dry steam there. Well, I let him sweat. I knew the firebox was OK except for a few leaky flues and I thought we had enough steam left to get water in the boiler again, so I told that bird off for trying to rawhide me. Then I handed him the monkey wrench and persuaded him to look in the firebox. It was OK. I then told him I had put out the fire when the water got to the bottom of the glass. So we relit the fire after getting a flutter of water in the gage and finally went on to town. Well, of course, he was grateful, said I had saved his job and our lives, etc.

Speaking of life saving, I've been accused of that lots of times. Not a great while after that I did save his life. It happened like this: I went back on the east end depot job. I fired for the "pet" who had tried to line me up on the dynamo. These two engineers were great pals. One day we were making a move next to the eastbound freight main line. This old boy, of the dry gage cocks, was lambasting 'em up the main and had the board. I told my pet all about it, but he tried to get a car behind us over a hard thrown switch. Well there just wasn't room. We were dangerously close to fouling the main and I was yelling "stop."

The other engineer was coming, top speed, leaning way out the window, waving and cussing. My old dumb Swede was still looking back at his switch and inching ahead. I couldn't believe it! At the last split second I jumped across the cab and slammed the automatic brake in emergency and went out the gangway to the ground. Well, the other boy went by, shaking his fist and cussing me, for nobody would believe any sane engineer would ignore a stop signal from his fireman at such a place. One couldn't pass a newspaper between our pilot beam and those cars whizzing by. Well, I was just fed up with trying to stop engineers that wouldn't stop; so, I gathered the ground crew around and did some cussing myself. I asked the so-and-so if he heard me yell stop at him. He said he did it, but was trying to squeeze the mail car over the switch while the drag was passing. Well, it was there for all to see. A red board run by, an engine all but fouling the main and the rear wheels of the tank not yet over the switch that he was trying to squeeze a car over. Nobody got hurt so we covered it up.

The engineer who laid off on us rather than test the oil burner long ago was a big friend of this dumb Swede engineer, but he was a good man on an engine. He thought a lot of me, too. Soon after this switch incident we got word that our engine was to go back to coal. Soon all engines were changed back. We had flange oil lubricators on our engines and were furnished a gallon a day of asphalt-based flange oil. This stuff was grand for valves and cylinders, too, when put in through the relief valves, so, knowing our boss' bad fault, I began to plan for the future. I got the engineer to ask that we get this same engine back in coal and I began to dope her with the flange oil and often some fuel oil, too. The engineer thought I was getting awful good to him, probably to keep him from cracking down on the coal pile too hard, but I had a different think in mind. I would leave the firing valve cracked so she would smoke a little while drifting and pour the flange oil in heavy, four times as much as needed and the oil and smoke would meet in the exhaust column and so I bushed the nozzle to better burn the coal. I didn't overdo it and nobody caught on. The fuel was changed, and I got back a good steamer. You see, the Old Man's one fault was beer-barrel nozzles, all right maybe for road engines that maintained high speed but definitely a drawback on low-wheeled switch engines, where throttles were never open long enough for compression to work harm. He always took personal charge of front end changes.

This my man couldn't understand, and failing to find any cause for complaint, he one day insultingly remarked that the company should appoint a traveling fireman, experienced in oil, to teach us oil burner firemen how to burn coal. I shut him up quick with the suggestion that I get Mr. Quigg to show him how to stop for a red board. Once again while we waited for mail loading, he opened the firedoor, peeped in and sat down shaking his head. I asked him what was wrong. He said, "I'd never fire an engine like that." At that minute his pal, my friend of the long hill oil burner, got up on our engine, stepped on the door trigger, looked at the fire and turning, slapped me on the leg, saying, "Old boy, you ain't forgot how, have you?" I thought I heard the snapping of friendship ties from our right seat box.

EARLIER in that year I saved another man from death. A switchman trying to pass signals to his engine stepped backward in the way of a fast passenger train, at early dusk. Our engine had passed him on a third track. I could do nothing but yell, and an ordinary yell was not loud enough, so I tried an old Comanche yell or scream like that of a cougar. It worked. That snake didn't take time to look around. I saw him squat to jump, then he was cut off from my view. We heard the ambulance soon. After I had been promoted some time I got a new switchman one day, a man with a heavy beard. He soon got up on the engine saying, "You don't know me, eh? I'm the bird you screamed at before the *Milwaukee Limited* hit me. I almost got clear but was knocked into the wheels of my engine and that accounts for the beard on my battered face."

I had attended the Fireman's Convention at Washington, D. C. as a delegate in 1913 and was now elected to go to Denver in 1916. I was proud to be so honored. I gave our members everything I had as local and general chairman. By virtue of this office, I took an active part at New York, Chicago and Washington in the national movement for an eight-hour day, which was ended by the enactment of the eight-hour law in 1916. All these memories have now perhaps a significance to me only, but I love to think back to the time when I was of signal service to my fellows. I was called back as engineer late in 1917. I withdrew as chairman in 1918, and joined the B. of L. E. that spring. No fireman was discharged who was not reinstated, during my terms as griever.

As I looked back down the road I had traveled, I was proud of the progress I had made against obstacles.

NOT ON THE WHEEL REPORT JOE EASLEY

"No cause for alarm, Madam—we go around it, usually . . ."

OHIO TRACTION

STEVE MAGUIRE

The Buckeye State's Long Interurban Routes
And Local Systems Totalled Over 3000 Miles

THE STORY of electric traction lines in Ohio is contained in the relatively short period of 60 years. There is probably no parallel in the history of business in which an industry rose to such great proportions, and fell so completely as that of the trolley and interurban traction companies. For many years the State of Ohio was the leader in the interurban field, with more than 2600 miles of fast traction lines. In addition, there were a number of local systems, bringing the track mileage in the state to over the 3000 mark.

Although the earliest electrifications in Ohio were on local horsecar lines, the tremendous growth of interurban lines in the later years almost completely overshadows the many urban city railway systems in the Buckeye State and for that reason our story must, of necessity, deal primarily with the long, fast interurban routes. The earliest electrification in Ohio took place on the short horsecar system in Lima in 1888. This was followed by many similar conversions of horsecar routes, and installations of trolley lines on new routes throughout the state. Early in the 1890s, just after the local systems had begun to experiment with electric cars, the interurban part of the story begins.

Right at the start we are confronted with an argument that has been going on for more than 50 years: Where was the first interurban line built in the United States? The correct answer seems to be Ohio, but exactly which line was first is a tough question. Interurbans, as we have seen them in later years, are electric railway routes connecting cities and giving relatively fast service largely on their own rights-of-way. Long suburban extensions of city routes are thus excluded, as are slowpoke cross country lines which can't make 40 miles an hour except on long down grades with a tail wind. Ruling out such lines, including a long electric opened in 1891 in St. Louis and running to a suburban locality at Florissant, we find that the first interurban roads were in Ohio.

Our choice for No. 1 goes to the Sandusky, Milan & Norwalk Electric Railway which opened service among the towns whose names it bears on December 1, 1893. The story of this road was more completely given in "Lake Shore Electric," *Railroad Magazine,* November, 1951. The 20 miles of track were operated for mail, freight and passenger traffic, and cars ran on a fast timetable schedule. If there is any question as to whether the SM&N line was the first interurban, then the choice might go to another Ohio electric, the Akron, Bedford & Cleveland, which opened in 1895 as a high-speed traction road between Cleveland and Akron. This line is frequently referred to as the first interurban.

Then, the interurban lines spread beyond the state. The last important connecting link was forged at Findlay in a Golden Spike ceremony on December 30, 1905 marking the connecting of the interurban systems of Michigan, Indiana and Ohio. You could travel across the state both in a north-south and east-west direction, from Cincinnati north through Toledo more than 200 miles distant to Detroit and points in Michigan. From New York points a connection could be made across the state to Fort Wayne and on through to Chicago. Only the southeastern portion of Ohio was not criss-crossed by electric lines.

Largest of all Ohio traction properties was the vast Ohio Electric Railway system formed on May 16, 1907 by a group of banking interests who merged a number of separate operating companies, including one corporation, the Indiana, Columbus & Eastern Traction (which itself was a consolidation of eleven separate lines) into a single unit owning 676 miles of track and operating 450 cars. For a few years the Ohio Electric made money. However, as was true of so many railway lines, automobiles, trucks and buses began to be seen on the highways, and the Ohio Electric went into the red and was broken up into separate companies, with the lines that were too far gone abandoned. The Cincinnati & Lake Erie emerged on January 1, 1930 as a subsequent consolidation of several of the OE lines. It operated 280 miles from Cincinnati to Toledo and Detroit and east from Dayton to Columbus in a vain attempt to regain the once-profitable interurban passenger and freight traffic through the use of fast, high-speed modern equipment. It was not successful, although giving service far superior to the competing buses and trucks, and by 1939 its last car had rolled into oblivion.

It was around the time of World War I when the interurbans began to feel the pinch of competition. Even before that a few of them were already gone. The Rapid

George Mabie

Transit Company of Ohio built a line to Dayton from Xenia early in the 1900s and the Dayton & Xenia Traction also began construction at the other end. Instead of getting together on a single line, the companies decided to compete. Result was that the Rapid Transit Co. folded up around 1907, the earliest interurban abandonment in Ohio. Our records show the first complete abandonment of a city system in Ohio took place in Mount Vernon in 1917 when the 9-mile Mt. Vernon Electric Railway stopped operating its 13 street cars along city streets.

The entire history of the Ohio traction lines would take volumes of print. But the story in each case was usually along the same set of facts, with the lines gradually giving way to highway competition. The last of the interurbans to get out of the passenger business was the Youngstown & Southern Railway, which surrended its passenger business to its bus competitors on February 28, 1948, bringing an end to the era of the passenger interurban cars. In a few instances, interurban lines still operate freight service with juice-motor cars. The Youngstown & Suburban is one,

Paul Dunn, Zanesville, O.

ZANESVILLE STREET RAILWAY. After World War I, trolley placards called the citizens' attention to a movie called "The Rainmaker," starring William Collyer Jr., Georgia Hale and Ernest Torrence at Quimby's, the local bijou. Today such a title would seem quite topical with scientists seeding clouds to make rain

plus the Toledo & Eastern, a ten-mile route operating a portion of the old Ohio Public Service Company line to Port Clinton and Marblehead; the Ohio Midland Power & Light Company with a few miles of third rail, formerly the Scioto Valley Traction, hauling coke and supplies to the present power plant at Picway, and the Marion Reserve Power Company with a few miles of ex-Columbus, Delaware & Marion Railway track at Reese.

The last city trolley system in Ohio is located at Cleveland where the city-owned transit system has slightly less than 100 miles of track in operation. Plans call for the end of local streetcars in about one year. Although this will mark the end of interurban and local traction service in the state, there remains a new type of electric line which we might term the modern counterpart of the old traction lines. This is the Shaker Heights Rapid Transit which was constructed in the 1920s by the Van Swerigens and has been successfully and profitably operated since it was opened. Using modern PCC cars and a few older streetcars, its route is located entirely on private right-of-way and, except for use of streetcar equipment, is a far cry from the old traction operation. It is regarded as the most dependable form of transportation in Cleveland today, and its rapid transit service has been the model for additional routes now under construction in Cleveland which will bring more fast electric railway service to other parts of the city. Although the trolleys and interurbans are gone, they live again in the form of the present and future rapid transit lines giving fast passenger service on their own rights-of-way.

We have tried to compile a list of all the trolley and interurban lines of Ohio in years past. Difficulties have been encountered, primarily because of frequent changes of name, mergers of smaller lines into big systems which are again broken up, and operation by controlling holding companies. Here is the list which we hope will cover all the trackage of electric railways in the State of Ohio from the first lines in the 1890s until the present:

Akron Transportation Co.

Ashtabula Rapid Transit, local line, 5.5 mi., 11 cars

Ashtabula & Lake Shore (see Pennsylvania & Ohio Ry.)

Camden Interstate Ry. (see Ohio Valley Electric Ry.)

Chillicothe Electric Light & Power, local lines, 5 mi., 10 cars

Cincinnati & Columbus Traction., Cinn.-Hillsboro, 57 mi., 10 cars

Cincinnati, Georgetown & Portsmouth RR., Cinn.-Batavia-Russellville, 57 mi., 23 cars, steam & electric

Cincinnati & Lake Erie Ry., Cinn.-Dayton-Springfield-Toledo, Springfield-Columbus, consolidation of IC&E and CH&D. Operated Dayton & Western until 1936, 280 mi., 95 cars

Cincinnati, Lawrenceburg & Aurora Ry., Cinn.-Aurora, Ind., 40 mi. with 32 mi. in Ohio, 12 cars

Cincinnati, Milford & Blanchester Traction, Cinn.-Blanchester, 37 mi., 14 cars

Cincinnati, Newport & Covington Ry., 70 mi. with 1 mi. in Ohio, 190 cars

Cincinnati Street Ry., local lines, 228 mi., 1490 cars

City Railway, Dayton local lines, 36 mi., 140 cars

Cleveland, Alliance & Mahoning Valley, (see NOT&L)

Cleveland & Chagrin Falls Ry., (see EOT)

Cleveland & Eastern Ry., (see EOT)

Cleveland & Erie Ry., Conneaut-Erie, Pa., 31 mi. with 3 mi. in Ohio, 14 cars

Cleveland Interurban RR., (see Shaker Heights Rapid Transit)

Cleveland, Painesville & Eastern RR., Cleveland-Ashtabula, 39 mi., 35 cars

Cleveland Rys., local lines, 360 mi., 1600 cars

Cleveland & Southwestern Ry., Cleveland-Bucyrus-Lorain-Wooster, 225 mi., 77 cars

Cleveland Transit System (see CR)

Columbus, Delaware & Marion Electric, Columbus-Marion, 60 mi., 30 cars

Columbus, Magnetic Springs & Northern, Delaware-Richwood, 18 mi., 10 cars

Columbus, Marion & Bucyrus, Marion-Bucyrus, 18 mi., 6 cars

Columbus, New Albany & Johnstown Traction, Columbus-Gahanna, 9 mi., 7 cars

Columbus Railway, Power & Light, local lines, 135 mi., 400 cars

Columbus & Southern Ohio Electric (see CRP&L)

Columbus, Urbana & Western Electric Ry., Columbus-Fishingers, 10 mi., 15 cars

Community Traction Co. (see TR&L)

Cooperative Transit Co. (see Wheeling Traction Co.)

YOUNGSTOWN & SOUTHERN. Effective photography was a matter of framing southbound Car 303 in the windowpane of Motorman Mitchell's northbound No. 302

J. P. Ahrens, Danbury, Conn.

Dayton, Covington & Piqua Traction, Dayton-Piqua via Convington, 37 mi., 18 cars

Dayton Street, local lines, 14 mi., 27 cars

Dayton & Troy Electric Ry., Dayton-Piqua via Troy, 49 mi., 25 cars

Dayton & Western Ry., Dayton-Richmond, Ind., 40 mi., 15 cars

Dayton & Xenia Traction, Dayton-Xenia-Spring Valley, 51 mi., 22 cars

Detroit, Monroe & Toledo Short Line, 83 mi. with 10 mi. in Ohio, 32 cars

Eastern Ohio Traction, Cleveland-Garrettsville, Chardon-Chagrin Falls, 54 mi., 30 cars

Felicity & Bethel RR. (see CG&P)

Fostoria & Fremont Ry., Fremont-Fostoria, 21 mi., 6 cars

Gallipolis & Northern, Gallipolis-Pt. Pleasant, W. Va., 5 mi., 9 cars

Hocking-Sunday Creek Traction, Nelsonville-Athens, 15 mi., 6 cars

Inter City Rapid Transit, Canton-Massillon, 1931 took over 10 mi. portion of NOT&L and operated with 15 cars

Interurban Railway & Terminal Co., Cincinnati - Lebanon - Bethel - New Richmond, 115 mi., 47 cars

Indiana, Columbus & Eastern Traction (see OER and C&LE), composed of CL&M, CN&Z, CBL&N, DS&W, UB&N, CL&S, CGC&SW, D&N, D&M, D&W and ZL&P

Kanauga Traction Co., (see Gallipolis & Northern)

Lake Erie, Bowling Green & Napoleon Ry., Tontogany-Woodville, 27 mi., 6 cars

Lake Shore Electric Ry., Cleveland-Toledo, 173 mi., 100 cars

Lancaster Traction & Power, local lines, 12 mi., 24 cars

Lebanon & Franklin Traction, Lebanon-Franklin, 11 mi., 2 cars

Lorain Street Ry. (see LSE)

Mahoning & Shenango Railway & Light, (see Penn-Ohio System)

Maumee Valley Railway & Light, Toledo-Maumee-Perrysburg, 23 mi., 15 cars

Miami & Erie Canal Transportation Co., Cinn.-Middletown, 42 mi., 7 elec.

Middletown Street Ry., local horsecar line, ab. 1918, 1 mi., 4 cars

Monongahela-West Penn Ry., Beverly-Marietta-Parkersburg, W. Va., 190 mi., with 12 mi. in Ohio, 215 cars

Mount Vernon Electric Ry., local lines, 9 mi., 13 cars, ab. 1917

DAYTON & TROY ELECTRIC. At least two Dayton systems reached Piqua, this one via Troy, and the Dayton, Covington & Piqua via Covington

INDIANA, COLUMBUS & EASTERN. Three-car special took customers to the International Air Races at Dayton in 1924. IC&E later was taken over by the Cincinnati & Lake Erie

Nelsonville & Athens Electric, (see H-SCT)

Newell Bridge & Railway Co., Newell, W. Va.-East Liverpool, 3 mi. with 1 mi. in Ohio, 10 cars

Northern Ohio Traction & Light, Akron-Canton, Uhrichsville-Ravenna-Greenville- Wadsworth, 250 mi., 390 cars

Oakwood Street Ry., Dayton local line, 11 mi., 34 cars

Ohio Electric Ry., Zanesville-Dayton-Richmond, Ind.-Union City, Ind., Lima-Defiance-Toledo, formed May 16, 1907 by absorbing IC&E, C&DT, L&T, FtWVW&W, 676 mi., 450 cars.

Ohio Public Service Co., TPC&L Div., 37 mi., 30 cars

Ohio Public Service Co., Mansfield-Shelby Div., 22 mi., 27 cars

Ohio Service Co., Cambridge Div., 13 mi., 11 cars

Ohio Service Co., Dennison-New Phila. Div., 2 mi., 5 cars

Ohio & Southern Traction, Columbus-Hartman Stock Farm, 7 mi., 7 cars

Ohio Traction Co., operated Cincinnati & Hamilton Traction, owned Cincinnati Traction local lines and Cincinnati Car Co., 36 mi., 37 cars. Sold to Cincinnati Street Ry. in 1926

Ohio River Electric Ry., Racine-Pomeroy-Middleport-Hobson, 13 mi., 18 cars

Ohio Valley Electric Ry., Hanging Rock-Ironton-Coal Grove, 13 mi., 25 cars

Pan Handle Traction, Steubenville-Wheeling, W. Va., 19 mi. with 5 mi. in Ohio, 15 cars

Penn-Ohio System, Youngston-Warren-Sharpsville, Pa., New Castle, Pa., formerly Mahoning & Shenango Valley, 150 mi., 260 cars

Pennsylvania & Ohio Ry., Conneaut-Ashtabula-Jefferson, 27 mi., 13 cars

Peoples Ry., Dayton local line, 32 mi., 90 cars

Plymouth & Shelby Traction, (see SM&N)

Portsmouth Street Ry., Portsmouth-Sciotoville, 14 mi., 23 cars

Rapid Transit of Ohio, Dayton-Xenia, 25 mi., 10 cars

Richland Public Service (see OPS, Mansfield-Shelby Div.)

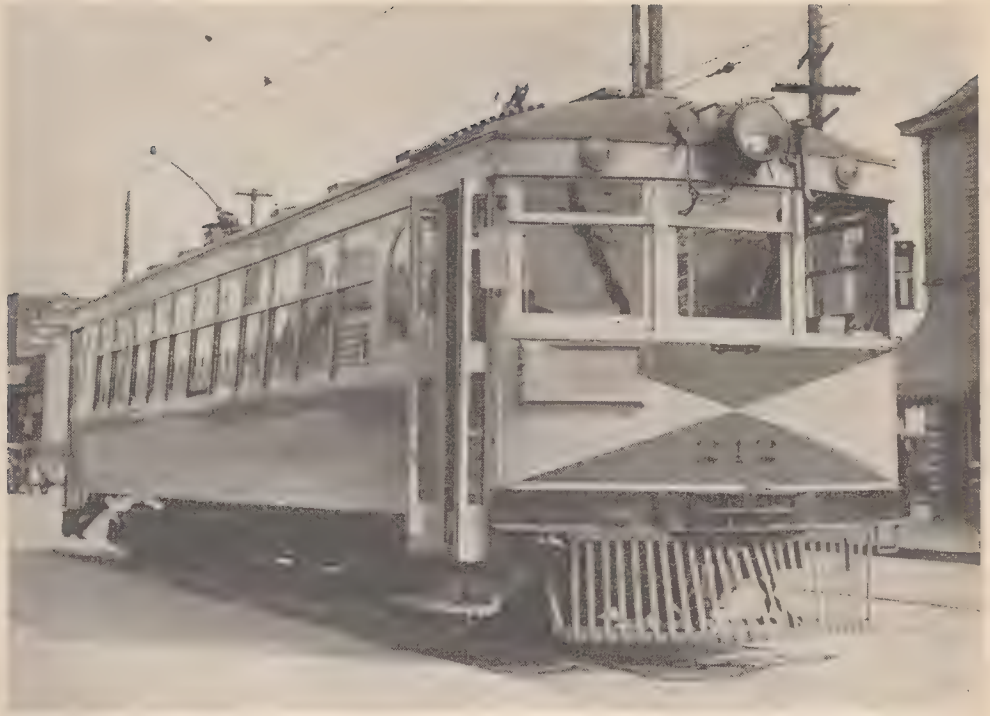
Sandusky, Norwalk & Mansfield Electric Ry., Norwalk-Shelby, 37 mi., 5 cars

Scioto Valley Traction, Columbus-Chillicothe-Lancaster, 79 mi., 32 cars

Shaker Heights Rapid Transit, Shaker Hgts.-Cleveland, 26 mi., 68 cars

Southeastern Ohio Ry., Zanesville-Crooksville, 16 mi., 19 cars
Springfield Ry., 30 mi., 80 cars
Springfield, Troy & Piqua, Springfield-Troy, 30 mi., 20 cars
Springfield Terminal, Railway & Power (see ST&P)
Springfield & Washington Ry., Springfield-So. Charleston, 15 mi. with 6 mi. over S&X trackage, 6 cars
Springfield & Xenia Ry., Springfield-Xenia, 20 mi., 6 cars
St. Joseph Valley Ry., Elkhart, Ind.-Columbia, Ohio, 71 mi., 2 mi. and 24 cars with steam & battery cars in Ohio
Tiffin, Fostoria & Findlay, Toledo-Fostoria-Findlay, 62 mi., 40 cars
Toledo, Bowling Green & Southern, Toledo-Findlay, 56 mi., 29 cars
Toledo & Indiana Ry., Toledo-Bryan, 58 mi., 15 cars
Toledo, Fostoria & Eastern Ry., Tiffin-Fostoria, 21 mi., 15 cars
Toledo, Ottawa Beach & Northern, Toledo-Pt. Place-Toledo Beach, Mich., 26 mi. with 10 mi. in Ohio, used 4 Toledo Rys. cars
Toledo Railways & Light Co., local lines, 112 mi., 400 cars, operated as Community Traction Co. in last years
Toledo & Western Ry., Toledo-Pioneer, branch to Adrian, Mich., 84 mi. with 70 mi. in Ohio, 24 cars
Toledo, Port Clinton & Lakeside (see OPS)
Victory Park Ry., Put-In-Bay-South Bass Island, 2 mi., 4 cars
Wellston & Jackson Belt Ry., Wellston-Jackson, 8 mi., elec., 12 cars
Western Ohio Ry., Lima-Findlay, Piqua-Celina-Loramie, 108 mi., 40 cars
Wheeling Traction Co., Wheeling-Barton-Shadyside-Warrenton, 60 mi. with 20 mi. in Ohio, Pan Handle Traction once part of WTC, became Cooperative Transit Co., in last years
Youngstown Municipal Ry., local lines, once part of P&O, 59 mi., 111 cars
Youngstown & Ohio River RR., Salem-East Liverpool, 38 mi., 9 cars
Youngstown & Southern Ry., Youngstown-Leetonia-Signal, 38 mi., 20 cars.
Zanesville Street Ry.

Korkes
CINCINNATI STREET RAILWAY. One CSR curio was the observation car *Maketewah,* built by the Cincinnati Car Company in 1915



Max Wilcox, Elyria, O.

CLEVELAND & SOUTHWESTERN RAILWAY. The Elyria-Oberlin local at Kamms Corners in 1928, shortly after the system had changed its paint scheme from green to orange. CLEVELAND INTERURBAN RAILROAD, *below*. One of six cars purchased from an abandoned northern Ohio interurban line and rebuilt for rapid transit use, Car 61 could run from the Green Road terminal to Cleveland Union Terminal 10 miles away in 10 minutes, including a dozen stops

Lloyd Dunning, Cleveland

Robert W. Richardson, Monessen, Pa.

LANCASTER TRACTION & POWER COMPANY. In back of No. 7 is the first Birney car ever built. Activity doesn't signify a busy Sunday afternoon—it's simply the lineup awaiting switching into the carbarn

H. R. Bates

CLEVELAND TRANSIT SYSTEM. The city which had the only operating four-track streetcar stretch in the U.S.A., Cleveland lost that distinction when the Detroit line folded two summers ago, wiping out two of the tracks

Dunning

CLEVELAND TRANSIT SYSTEM. The St. Clair-Public Square car, PCC-type No. 4229, prepares to turn into the end-of-line loop at Euclid Beach Park on Lake Shore Boulevard

SPRINGFIELD RAILWAY. The Limestone car in 1915 was one of 80 the company owned. The line itself was the only one operating strictly in Springfield, others hitting such towns as Troy, South Charleston and Xenia

Maguire

HEADING FOR PASTURE. One of the former Eastern Massachusetts Street Railway cars, No. 4400, owned by the Metropolitan Transit Authority, on the start of her trip by truck from Boston to the Seashore Electric Railway fan museum at Kennebunkport, Maine

Carbarn Comment

STEVE MAGUIRE

THE SPECTER of abandonment hovers over many of the remaining interurban lines these days, and one by one they seem to be starting on the way out. In the Pittsburgh area, where not too long ago there was a multitude of fast interurban routes, it now appears that none will last out the present year.

West Penn Railways, a busy system in the coal mining area which once boasted a dozen routes in the Greensburg-Connellsville-Uniontown district, saw its last routes give way to buses this past summer. The Irwin-Greenburg line went out first, on June 26th, followed by the Latrobe-Hecla portion on August 2nd. The finale came on August 9th when the main line from Greensburg through Connellsville to Uniontown and the South Connellsvile local route made their last runs.

The two Pittsburgh Railways interurban lines to nearby Washington and Charleroi will be cut back to suburban Pittsburgh, possibly even before you read this. Included in these changes are the three local routes in Washington. These will also be bus-run when the interurbans are cut back.

In the midwest, the Illinois Terminal Railroad, which is preparing to give up its route to Alston, has filed an application with the Interstate Commerce Commision to abandon the major portion of its route from Peoria through Bloomington to Decatur, reports Ralston Taylor, 1193 West Main Street, Decatur.

Another reader, Ara Mesrobian, 6810 Connecticut Avenue, Chevy Chase Md., tells us he rode the Ilinois Terminal recently and found business poor on the Peoria-Decatur and Decatur-Watkins segments. He says the road passed up its last dividend because of reduced carloadings and costly repairs to the McKinley Bridge. The recent steel strike didn't help it, either.

Mesrobian learned in a visit to Cedar Rapids that the Cedar Rapids & Iowa City interurban line is ready to request abandonment of its passenger service between the two cities, but has held up making an application until it finds a bus outfit to take over the business. This is the road that uses ex-Cincinnati & Lake Erie interurban speedsters, but our correspondent noted that the cars were far from well maintained and at least two were on the bad order track.

For those interested in an unusual trolley ride, Mesrobian recommends the St. Louis Water Works line which makes three round trips daily on the five-mile route to Chain of Rocks pumping station. The line is owned by the city and runs solely to accommodate city workers at shift changes. Railfans can ride the car if they obtain written permission from the water division commissioner at City Hall. It's the only line of its kind.

* * *

BRITISH FANS bade farewell to the last London tram July 5th on its run to New Cross in South London. The London trolleys date back to March 1861 when the first horsecar line was opened. At the height of operation there were more than 350 miles of track on the London transport system.

From Tasmania, Australia, R. D. Raynor, Main Road, Claremont, tells us there are only two routes left out of seven on the Launceston tramway system. The first four routes to be abandoned were replaced by diesel buses, and the last one was replaced by trolley buses. It is planned to replace the remaining lines with trolley buses by the end of this year. In Hobart, the capital of Tasmania, there are four routes left out of eight, the other four having been replaced by trolley buses. However the situation in Hobart is a little better than Launceston. The cars are in good condition and three of the routes appear to be reasonably safe from abandonment.

NUMEROUS CHANGES in the paint scheme of trolleys of the Philadelphia Transportation Company prompted Tom Bateman, 928 East Haines Street, Philadelphia to ask why.

Seems that the colors of the nearside cars were orange and green for many years. There were no radical changes until the advent of the PCC cars, which were painted aluminum at first and green later on. During the last war the older cars were all painted green, with no more orange cars. Last fall the dark green cars came out of the shop with cream trim and later on they came out with a lighter green color. Now they are going through the shops with solid cream up to the roof from the sill height.

The latter scheme has finally been accepted by the company, which found that the same yellow or cream trim on the whole upper surface could be sprayed in one operation, reducing costs all around. In this manner four cars a day are completely painted and the entire fleet of PTC cars will be painted in a two-year period. After this each car will be repainted every two years.

* * *

TALES of the old days of trolleys in New York are brought to us by John Conaty, Dumont, N. Y., who recently met a motorman of the old Steinway lines.

"Back in the early days of the century the route from the 92nd Street ferry and North Beach was busy, especially on Sundays and holidays. All cars were two-man operated. Most of the conductors considered it their bounden duty to prevent the overburdened company clerks from working themselves too hard counting the nickles the conductors reluctantly handed over to the company. So they regularly dipped into the take from the car—usually about three dollars a day.

"On some occasions the conductors failed to include the motorman 'in'. When this condition prevailed it was the custom of the wronged operator to keep

his car pilot practically rubbing the paint of the car ahead and in this manner the car behind took in almost no fares. After a few trips like this, the miscreant conductor would see the light, especially when he had to explain to the superintendent the reason for the paucity of fares he was turning in."

* * *

"WHEN the New York subway was first opened in October 1904," writes Felix Reifschneider of Orlando, Fla., "it was realized that a fireproof car was needed but no all-steel car was available and the carbuilders said they could not build one. So the famous composite cars with the copper sheathing were built for the subway. However, the idea of an all-steel car had not been abandoned, and George Gibbs, engineer in charge of car construction, designed one. He tried to get the carbuilders to build it, but they refused; said they couldn't.

"You probably know that John B. McDonald, contractor who built the subway, was financed by August Belmont, a financier who was also a director of the Pennsylvania and the Long Island. So it was possible to arrange for the Pennsy to build a sample all-steel passenger car in the Altoona shops. When the carbuilders saw that such a car could really be built, then it became possible to interest the ACF. It is also not commonly realized that, although the New York Central and the New Haven, as well as the Manhattan Ry. (elevated lines) and the Metropolitan Street Ry. (surface lines) as well as the Brooklyn Rapid Transit or its predecesors (mostly, I believe, the Brooklyn Union Elevated) were all invited to build the first subway, they all refused on one pretext or another, the main reason being that no one thought it could be made to pay at a 5-cent fare, and that it was really interests allied with the Pennsy that finally did build the subway. The Pennsy was interested principally because of the possible tie-in with the LIRR.

"I suppose you know that the track connection between LIRR and IRT at Flatbush Ave. station in Brooklyn existed for many years, may still be there, but was never used except as a means of delivering some of the first subway cars in New York.

"Wooden cars (so-called composite cars) were finally abandoned in the New York subway, or shortly thereafter, as a result of the fire at Astor Place station about 1909, when one of the cars was burned to the trucks.

"The first all-steel cars of the IRT-LIRR were also notable in that they were the first instance of the use of aluminum, mostly for trim. The figure that sticks in my mind is 3 percent—whether this means 3 percent of the car-body's weight was aluminum, or that the weight of the car was reduced by 3 percent over what it would have been if it had been all-steel, I don't recall. The LIRR and IRT steel cars were identical. The center doors did not exist on the first IRT cars at the time they were built. They were cut in later on. Of course, all cars after that first order had the center doors built in when constructed.

"These all-steel cars went into service in April 1905 or thereabouts. The West Jersey & Seashore was being electrified between Camden and Atlantic City about the same time. But strange as it may seem, although the first all-steel car had already been built, wooden cars were decided upon for the WJ&SS. These cars went into service in 1906. I believe, however, that they were the last wooden cars built for such service, all cars thereafter being of all-steel construction, after the success of the LIRR-IRT cars had been demonstrated.

"The WJ&SS got into trouble when the N.J. Public Utilities Commission began to complain about the use of wooden coaches on the same line with steel coaches, because of the collision danger. As a matter of fact, the WJ&SS had bought some steel coaches similar to those in use on the LIRR, which were, of course, virtually Pennsy standard construction, used also on PRR steam lines as steam coaches

with minor modifications. I believe the WJ&SS had a train of six or seven steel coaches. To stop the complaints from the PUC the WJ&SS sold these cars to the LIRR about 1920. I remember it very well, because I was riding the LIRR in the days when the cars came to Long Island. There were at least one combine car, numbered about 1360, and five or six regular coaches. I used to know the numbers but forget them now. Weren't they 1350 and up? It was always possible to tell them from LIRR cars because the door from the vestibule into the car body was one big door, and a swinging door at that. The LIRR coaches of the same type had two sliding doors that met in the middle. The LIRR later adopted a single large sliding door but these cars were easily distinguishable, as they were of a later and lighter design, and could never be confused with the earlier coaches of the MP-54 design, later classed as MP-54A since the later and lighter weight designs became MP-54B, MP54C, etc.

"But the West Jersey & Seashore in selling these steel cars to the LIRR (really merely a transfer of rolling stock from one division to another since the Pennsy owned both the LIRR and the WJ&SS) was equipped solely with the wooden cars of 1906. They sold the most modern cars they had to the LIRR. This kept the Public Utilities Commission off their necks until recently, when they insisted on removing wooden coaches from the WJ&SS, whereupon the Pennsy abandoned electric operation. It is too bad, but I understand they were doing very little other than rush hour business. There was a train only every four hours to Millville at other times, hardly frequently enough to justify running the substations to keep the third rail hot."

NOT FRISCO. It's modern-day Brisbane, Australia, with a tramcar on the Queen Street run. **Note that traffic keeps to the left hand side of the road**

Brisbane City Council, Transport Department

KING FOR A TRIP

J. A. ARSENAU

The Con Was a Tyrant Until The Kid Brakeman Came Along

FUNNY HOW a place gets a name; or a train like I'm going to tell you about. They called it the "Mule." Back in the days when we named it, it was quite a train. It provided transportation for a newly-settled section of country, which was as tough as any place on the Restigouche & Upsalquitch.

Folks hoped this new line would become a second main—maybe bigger than the one between Halifax and Montreal—

but it didn't work out that way. First the lumber industry died out; then the pulp and pit-props hit a slump, and finally the whole shebang slid to rock bottom. If it hadn't been for the American and the western trade, the line would have folded up like an old accordion.

But like I say, the Mule was something in those days. A mixed train bustling with energy and newness, lumbering in a crazy pattern over the land, carrying its load of pulp and logs, and a car of swearin', sweat in' lumberjacks. Reckon there's quite a few left who remember why we called it the Mule.

Four or five of us were standing outside the yard office around 60's time. It was a warm quiet Sunday morning in early June—it seemed like the town was dozing before the afternoon's activities began. We were jawing about some run or other, and the only noise to disturb the quiet came from the impatient snorts of a yard engine.

I remember the callboy came over with a piece of paper in his hand. He waved it at us, then handed it to Bruce Holding to read. We crowded around, curious to see what the bulletin said. There it was before our eyes; the news we had been waiting for the past month. No. 216 and 217, running out of the pool for the past six months, was to run on a schedule daily, with an assigned crew.

Of course we all knew the meaning of that decision. It was plain that Old Hutchinson would be hogger, with Bats Kelly as his fireman. And in line for conductor would be Gus Malone—that's what hurt. I can see him now, his fat belly hanging over his pants belt—his trousers were always four or five inches below high water mark. His little beady eyes would be squinting as if he were having a hard time seeing you, and while he'd be talking to you his shoulders would suddenly jerk upward three or four times. Then you'd know he was excited because the words would tumble over each other, while he'd pull at his pants to hoist them back in place.

No one ever wanted to work with Gus Malone. Of course somebody had to. The job paid well—there was big mileage, way freight rates, and you were in bed every night in both terminals. Any way you looked at it, it was a good job—except for Malone. If he wasn't around, someone on the board would catch the trick. Then the nervousness would disappear, and surprisngly, everything would go well But if Malone went out, something was sure to happen to delay the train Like the time he tied up the works because he forgot to remove a derail and put a car truck off, while the train sat on the main pike. Then there was his desk in the baggage end of the coach. Nobody ever sat at that desk but Malone, even when he wasn't around. Nobody challenged his authority. It was Malone's desk, and he used every opportunity to notify his brakemen of that fact. He owned it just the same as if he owned the road, and had a mortgage on the souls and bodies of his men.

Malone had the best house in town He was chairman of the conductor's lodge and had been alderman for a time. Gradually he was getting wealthier. He held mortgages on a few of the men and had bought several hundred acres of land. If he wanted something he couldn't buy, he'd get it one way or another, even if it took years. Maybe just by collecting on a mortgage or loan due. It didn't matter if you were a friend or relative—you got notice to come across, or else

Mornings Malone would come down to the yard office, sometimes with someone but mostly alone. He'd get his orders, sign and fill in the register, then make his way to his train. You could see him making his way across the tracks, his pants almost down to his hips; while all the while he'd be spitting through the side of his mouth. No one would say anything as he'd climb into the engine cab; they'd wait to see what he had to say. He usually didn't say anything, only stand there, his little pig eyes roaming about the cab. I knew he didn't like our company much. He just liked to come and throw his weight around—quietly, of course, but we

had no doubts as to what it added up to.

AFTER the train started, he'd settle his bulk in his chair, while his brakeman watched him closely. Miles would pass before he'd speak. He'd just sit there, filling out his mileage and switch list, his big body filling the chair as the ancient coach twisted and groaned. My eyes would be glued to him, ready to jump if he ordered anything. I hated his guts, but I was afraid of him.

In those early days there were others like him up through the whole, dusty, windswept reaches of the railroad—wherever the ribbons of steel penetrated Men like him, owning us body and soul, molded us to their wills. There wasn't much we could do about it even if we tried. Complaints went unheeded; the buck was passed from one official to another and when the investigation was through the informant was likely to find himself with a few brownies, or on the gate for a thirty-day vacation.

One morning I got down to the office before Malone, and found that our regular brakie was off. His substitute was sitting in the coach, and we began to jaw while I filled my lights and swept the car He was a young fellow, tall and slim, with a slight slump to his shoulders and inclined to talk with a plaintive drawl. He had brought his lunch pail, overalls and bed-roll, and had hastily flipped them into place as if time was a burden and this particular trip was just another thing to get out of the way.

Anyway, we were jawing away talking about this and that. We were early, since the train was made up but the engine hadn't come out yet. Instead of going up ahead, the new man was sitting there smoking, waiting for Malone.

Presently we saw him coming across the tracks, with that peculiar shuffle he had, the right shoulder going up and down, and a wad of bills in his hand.

"Mornin', sir," the brakie said as Malone came into the coach "Nice morning isn't it?"

It seemed all noise outside stopped as if waiting for the conductor's reply. I didn't realize it, but I hadn't greeted the boss myself. Guess I was tensed for the dirty reply that might be coming When he didn't speak, I saw the brakeman's face turn a deep, ruddy color. His eyes, which had been twinkling with good humor a moment before, had lost their sparkle. In its place came a hurt look, and a smudge of color that spelled rebellion and conflict, as if he couldn't quite decide what to do in a case like this. Suddenly he relaxed and grinned at us, the tall lanky leaness of him loose and at ease—quick, smooth action waiting to be released.

He swung off the chair and with gloves in hand, started for the door.

"Name's Kennedy, Bart Kennedy," he said, "and my number's 1216 Guess I'll go ahead now."

He looked first at Malone, as if waiting for some sign of approval from the conductor, then he looked at me.

I felt sorry because he seemed such a clean, fresh young fellow. Reckon I spoke without thinking.

"Sure, Bart, that's okay. Stay ahead until you're hungry, then fall back and have some lunch"

Malone grunted. It was the kind of snort you'd expect from a pig. It was full of contempt and scorn and dislike for the spare man. Kennedy looked at him steadily and the grin began to fade from his face.

"What the hell's the matter with you, mister?" he asked. "You not feeling well this morning?"

Malone stared back at him, his jaw clamped hard and a sneer curling his lips I thought of this for a long time afterwards. I figured Malone had been taken by surprise. After all, it just wasn't done, talking back to Malone. I reckon he'd been set to put Kennedy in his place, and maybe at the same time give me a hint that I didn't have much to say either. He stared at Kennedy, his shoulders going up in short jerks.

"You get the hell up to the engine," he said in a raspy voice, "and watch for set brakes as you go. And don't let me see

you back here until I call for you."

Kennedy stared at him. For a moment I thought he was going to say something. I don't know what was on his mind, but he didn't look like a fellow who would ask for trouble—or dodge it either. Then his face broke into a grin.

"Okay, mister," he said, "but don't you go making any passes at me. And I'm coming back at the regular place when everyone else comes back." He moved down the steps. "Guess I'll go. I don't like the smell in here anyway."

Maybe Kennedy didn't know that this was something Malone hadn't expected, or maybe he did. The young quirt wasn't acting according to type. I could see the beginning of a very interesting and dirty trip.

Malone waited until Kennedy was on the ground, then he swung himself down directly in front of the brakeman.

"I said for you to inspect your train and get the hell up front where you belong. Suppose you get goin'; or do I go to the yard office and turn you in?"

KENNEDY looked at the man kind of surprised; then he looked at me. When he spoke his voice had changed. It held a threat, a challenge. I could see he wasn't afraid or worried.

"Mister Malone," he said slowly, "I told you not to make any threats. I guess I know what I have to do—and I'm ready to do it. As for this turning in business, you got any grounds to lay that charge? Anything you ordered me to do I refused? Now I'm goin' ahead."

The conductor gulped, slowly clenching and unclenching his hands, and a red flush crept up his cheeks.

"Listen, fella," he roared, his voice thick with fury, "We'll settle this thing later. Right now I have a train to get out. This is something you're going to regret for a helluva long time. Understand?"

"Why sure, Con'." Kennedy smiled tightly, casually lit a cigarette, then shot a look at Malone. "I'll have something to say about that myself." He turned on his heel and started up the length of the train.

You must be thinking I was kind of a funny fellow not to say anything to pour oil on the troubled waters. I mean not trying to make it easier for Kennedy. But you got to try to see it through my eyes. Maybe then you can understand.

When you're running regular with the same crew, believe me, you've all got to work together like a well-oiled machine. What I mean is, you can't begin bucking each other, making it hard for everyone. You work from daybreak, and sometimes until late in the night, moving freight, switching, and all. There are meets to make, sometimes long delays, and flagging. Then there are days when morning ushers in rain and you work cramped in oil skins, wet and miserable.

Like I say, if I was to stand up to my conductor I'd lose, sure'n hell. I just couldn't say anything. After all, the spare man is out only one trip; perhaps I wouldn't see him again for six months. And I was just another brakeman trying to get by. What could I do against a conductor who was waiting for a chance to nail my hide to a fence? It would be his word and years of seniority against the word of a young brakeman.

Anyway we got away on time. The sun was perched high on the mountains like a ripe orange hanging by a thread, when we left the main pike and crawled, snake-like, into the INR line. Malone hunkered down in his chair, a smouldering volcano, while I let on I was busy with a lantern that didn't need cleaning. Neither of us spoke. The conductor had that dog-mean look on his face and I knew he was sitting and thinking and boiling inside.

Seemed like a mighty long time before we reached Whites Brook, where we had to meet No. 217, but it couldn't have been more than six hours. Malone seemed to take no notice. He gave me the lists; we did our work. There had been no delays, no accidents. Everything had gone like clock-work. Kennedy had been doing his work well. He knew the job; every signal was relayed properly and effectually. But the tension was mounting and the air seemed charged as noonday drew near

and lunch time came around. It was eleven when we eased ourselves along to the outer switch at Whites Brook, where the water runs deep and quiet between the foothills and the tracks. The wind had risen and was whipping at the cars, slapping at the loose doors, the long scorched summer grass bending under its force. We held the main line, and when we reached the switch, stopped to wait for the eastbound. The conductor and I both had had our dinner; so I started to walk the length of the train to the engine. Up ahead Kennedy had the switch over and was on his way back for lunch. And there, standing by the van, was Malone with those gimlet eyes boring holes in my back as I walked along the train. Suddenly I knew that the hour for the showdown had arrived.

Seemed like a long time, but I guess it wasn't more than five minutes before the kid reached the van. I saw him tug his cap down over his eyes, remove his gloves and approach the conductor. I saw Malone say something to the lad, then go to the van and up the steps followed by the brakeman.

Presently Kennedy came out carrying something in his hand and started back along the track. Malone was sending the kid flagging. Now every man, from the greenest kid to the oldest Con, knew that there was no need for flagging on this line. There was only one train a day each way; and we were meeting that drag here. Yet here was Malone pinning the kid down to Rule 99. That mean devil was strictly enforcing the rule that a flagman be sent to the rear on any unforeseen stop. Our meet was fulfilled, but the opposing train had not arrived. That left our rear exposed, and Malone was sending Kennedy out to protect it.

I COULD imagine Malone gloating as he sent the kid back, carrying his fusees and guns to flag a train that would never show up.

But I had to hand it to the kid. He knew the conductor had him dead to rights. It wasn't healthy in those days to argue or try to buck orders—not against Malone it wasn't.

Kennedy hadn't gone ten telegraph poles before we heard the long drawn-out whistle of the approaching train. It was a mournful sound and its echo seemed to suspend itself wistfully in the morning air.

From the switch I saw Malone wave frantically to Kennedy to turn back as he hollered for his attention. But Kennedy paid no heed. He moved jauntily down the center of the track, one foot after the other, like he was enjoying a huge joke. Then suddenly I realized the brakeman had Malone over a barrel and was enjoying it immensely.

I saw Malone stop waving, turn quickly and run for the engine when he became aware that Kennedy was going to go out his distance and stay there until recalled by the hogger. And suddenly I felt like letting out all the pent-up hatred in one loud, side-splitting laugh. Then Malone was climbing into the cab, with oaths streaming from his lips. And did I love this situation!

Around the turn came the train, black smoke pouring from its funnel, jets open as the tallowpot fed her the coal, while to our rear Kennedy moved leisurely away from our train. Then four long blasts from our engine whistle ripped the echoes across the hills, recalling the flagman.

Kennedy refused to take any notice. He glanced back to see how far 217 was in; stopped as he listened to the call for him to return; then kept on sauntering to the distance he had to go. I saw him bend as he set his torpedoes, light a fusee and stick it in a tie. He stopped then to light another cigarette as the brakeman of the other train opened the switch and the freight began its grind onto the main pike.

The sun came out from behind a cloud, hung over us like a ball of molten iron, heat searing the air between the hills. Noon on the INR, where nothing moved, where all things seemed dead. The fireman, hogger and I squatted down in the shade of the engine, sweat oozing from every pore, as we watched the tail end of

the departing train disappear. Malone was standing by his van waiting for Kennedy to come back.

Before the kid was halfway there, I got up and started for the tail end. I thought I might save Kennedy the abuse he'd be in for by taking my place and letting him go up ahead.

Kennedy got to the van about the time I arrived. Malone was sure fit to be tied; sweat was running down his face in rivulets. His shirt was soaked and his breath was coming in gasps. His face was a beet red.

"You! You there!" he roared at Kennedy, as he grabbed at his pants to keep them up. "Why didn't you come in when I hollered at you?"

Kennedy stopped, took the cigarette from his lips, threw the butt on the ground and stamped on it. Then he dug into his pocket, came out with two torpedoes and a fusee and threw them on the van steps.

"Well," said Kennedy, "if it isn't little Gus ready to blow his top. Figger you're quite a man don't you, Malone?" His voice was loaded with contempt and insult. "You figure there's only one God Almighty and you're him. You plan and dictate every move a man makes. Well, Malone, nobody's ridin' me or tellin' me how to move. You're just a bum that's missed a lot in life, and now you're tryin' to make up by bullyin' for what you missed."

Malone looked awful, standing there flabbergasted, his eyes growing red with fury. I figured the kid had gone wacky because every word he said was getting the conductor madder and madder.

They just stood staring at each other. Kennedy was about four inches taller than Malone, but the conductor must have outweighed him by a good twenty pounds and he looked as if he could crush the slim, wiry Kennedy to a pulp.

Suddenly Malone stuck his foot behind the brakeman's leg and gave it a snap. It happened so quickly Kennedy was caught off balance and went crashing on his back with a jolt that must've knocked the breath from his body. Malone stood over him, fists clenched, waiting for him to make a move.

For a minute the kid lay there, surprise written over his face. Finally he got to his knees, hesitated a second, then got to his feet. His face was ashen white and his eyes blazed as he looked at Malone. I expected him to explode and throw himself at the conductor. But he steadied himself, getting his wind, then threw off his jacket.

"We'll see how good a man you are, Malone," he said softly. "You've got to find out sooner or later. Now let's see you fight fair."

The conductor moved back and Kennedy stepped up slowly, hooked a foot under his jacket and kicked it out of his way. He removed his cap and sent it in the same direction.

A leering grin came over Malone's face, like he'd been waiting for this break. He raised his big calloused hands and rushed at Kennedy.

THAT WAS a fight I'll never forget! When the fracas started, the hogger had already started backing the train; then he and the fireman jumped down to see what it was all about. Malone plowed into Kennedy, swinging punches from all directions. I saw those ham-like fists flaying the air and Kennedy moving easy and quick just out of reach. If the conductor's hands ever landed they would knock Kennedy's block off. But the kid's every motion was easy and springy, hands blocking the conductor's swings, no effort wasted, like a well-trained boxer. He'd dig under Malone's punches and plant a fist to his face, once, twice and three times in succession. Then he'd connect with a solid punch to his mid-section, burying his knuckles deep in the rolls of fat that hung over Malone's belt.

Once Malone rushed into an opening and one of those big fists connected with the side of Kennedy's face. A cut opened up over his eyes, gushing blood along his cheek and over his shirt. Kennedy staggered, sank to one knee, fell over and lay on the ground.

Malone, weaving from exertion and the punishment he had taken, rushed over and aimed a kick at the fallen man's head. If it had landed it would have caved in Kennedy's face and finished the fight right there.

Kennedy was shaking his head and pushing himself up when the hogger shoved himself in front of Malone, pushing him aside.

"Leave the kid get up," he said menacingly.

Malone scowled, but moved back and Kennedy got to his feet. He weaved a bit, then came boring in, and once more they were swapping punches.

Soon Malone's face was swollen and bruised. It wasn't long before he wasn't moving so fast, and that smug look had disappeared. One eye was badly swollen and there was blood dripping from his chin. But he kept boring in, trying to land another punch, while Kennedy kept battering away at his swollen face. It wasn't a nice sight to look at. Didn't seem a man could go on taking such punishment. Guess he was so tarnation mad he didn't feel the aches.

They were slugging it out toe to toe now. I saw Kennedy's fist sink into the conductor's belly almost to its wrist, and the "ooowh" that came out of Malone's mouth could have been heard four carlengths away. I could feel it in the pit of my own stomach.

Malone staggered, made a few feeble passes as Kennedy danced out of his way. Then the kid saw an opening and stepped in. A left to the stomach and a right cross to the chin, and Malone's nose spurted blood. I guess Malone knew he had enough, for he put his hands to his face and staggered over to the train, leaning against it for support, his face all bloody and raw as a steak.

"Satisfied?" asked Kennedy.

Swaying unsteadily, Malone looked at Kennedy with his one good eye and nodded weakly. He was whipped.

"Give him a hand," Kennedy said to me. "Get him back to the van and bathe his face an' put a plaster on that cut."

Just like that. Never saw the likes of it in my life.

I helped Malone into the van, sat him at his desk. Kennedy broke open the first-aid kit, washed and bandaged the conductor's swollen face. And all the time Malone sat there, not a word came out of him.

After we had finished, Kennedy washed his face and patched a cut on his cheek. Then he went out and picked up his jacket and cap.

"Now I'll eat," he said. "I'll go up when we reach St. Quentin. And don't forget, Malone," he continued, "there ain't nobody as good as you thought you were. Understand?"

Malone wasn't the same conductor after that. Once in awhile he'd try his high-handed stuff, but it wouldn't work any more. The men would look him in the eye, then tell him to go to hell. Malone would just look at them blankly for a moment, then turn away.

And as for me. Well doggone, if I didn't get up enough courage to sit at his desk, even if he was around. That fight gave me guts.

Wasn't long after that someone began calling the train the "Mule". Guess it was a namesake for Gus Malone. And that's what it's called today—many years after that fight.

As for Kennedy—well, Malone turned him in, like I expected. Didn't do much good, though. On the carpet the crew's statements—the hogger's, fireman's and mine—kind of leaned in Kennedy's favor. He collected ten brownies while Malone took a forced vacation for thirty days for instigating a quarrel.

Well, we all had taken more than our share of abuse from Malone. We realized we should have stood up to him long ago. It took a raw, rangy kid to show us that Malone's type is one of a pattern; all bluster and hot air. If they can get away with it, that is.

I saw it in those days, and I see it today. Even some of our young fellas think they're not good railroad men if they can't ride the new hand.

Build a Baldwin
SHARK-NOSE DIESEL

HENRY B. COMSTOCK

THE OTHER DAY I dropped in at the Baltimore & Ohio's Glenwood Shops in Pittsburgh to see how the East's pioneer user of diesel road engines pulled down its freight growlers and set them back on their feet after what would correspond to a Class 1 steam locomotive overhaul. Shop Engineer G. A. MacMillan was just pointing out the highlights of the testing track when a shark-nose Baldwin barreled by, heading up the Monongahela with a mile of merchandise.

"What do you think of that?" I asked him, expecting a burst of corporate enthusiasm.

"Can't say, yet," he answered with Gaelic caution. "They've only been running a year, and it will be 1958 before we get a chance to strip one of them down to the main frame. By that time she'll have knocked off 1,300,000 miles."

From the standpoint of dramatic appeal it is safe to say that no diesel yet designed presents a more personable appearance than the mainliner with the five-sided front. Her rakish prow and flared-in flanks, her distinctive pilot and high cab contour, all add up to appearance of power and speed, and that, in terms of model building, is what most of us look for in a prototype.

As in former sets of locomotive and equipment drawings, I have made no attempt to indicate table-top modifications of the original design. It is a safe bet that anyone who can reproduce this big girl in miniature will have his own ideas for framing the cab and applying a suitable drive. The large battery boxes and fuel tanks provide plenty of space for a husky electric motor with flexible shaft connections to the trucks, and those who prefer to mount smaller motors directly on the truck frames will find generous side-wall clearances for swiveling installations.

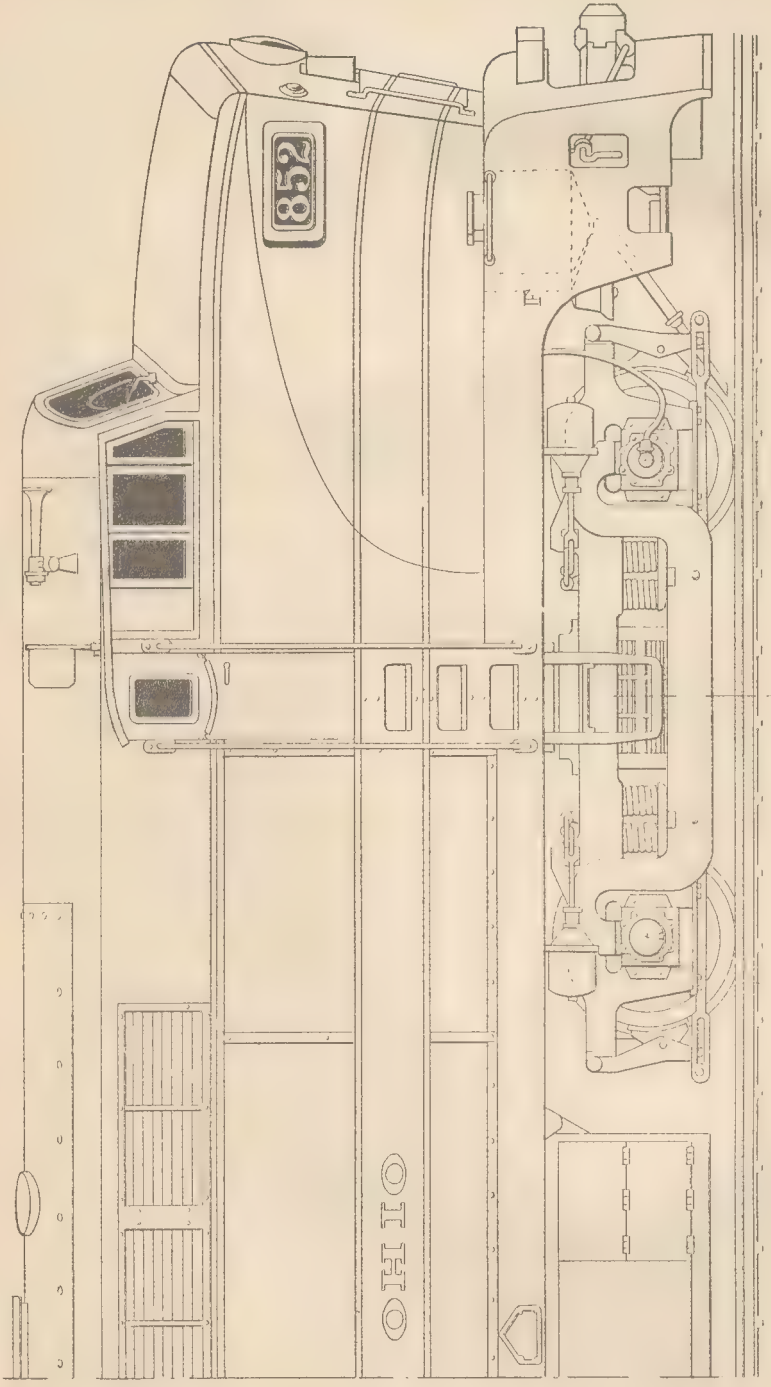
Probably the most difficult problem is the shaping of the nose section. It might be pointed out that every complex plane and curve in this assembly plays a functional part in increasing visibility for the engine crew. Even the blunt snout of the General Motors' road diesels cuts off a bit

more of the track area ahead as seen from either the windshields or the side casements.

Practicality determined the design of the inward-sloping louvre sections on the sides of the cab. Baldwin engineers will tell you that the object is to secure a supply of clean air, free from the dirt and dust whipped up by the running gear. This same feature has been incorporated in the Ignitron locomotive engineered by Westinghouse and built by Baldwin-Lima-Hamilton for service on the Pennsylvania Railroad.

If you are a glutton for punishment you will build up your cab from metal, soldering the individual sheets together and rounding off the seams with pattern files. The woodworker will have an easier time, and a good job of lacquering will make it impossible to detect the subterfuge. But there is a third method, just coming into popularity, which is well worth your consideration. This is the use of liquid plastic, poured into a latex mold formed over a wooden or plaster model. The three-fold beauty of a cab made in this fashion in that once you've shaped your original model you can cast any number of units in a matter of minutes; that the basic color of the cab can be worked into the plastic, eliminating all future paint jobs, and that, when thoroughly cured, the plastic itself is considerably tougher than wood, and has

Continued on page 116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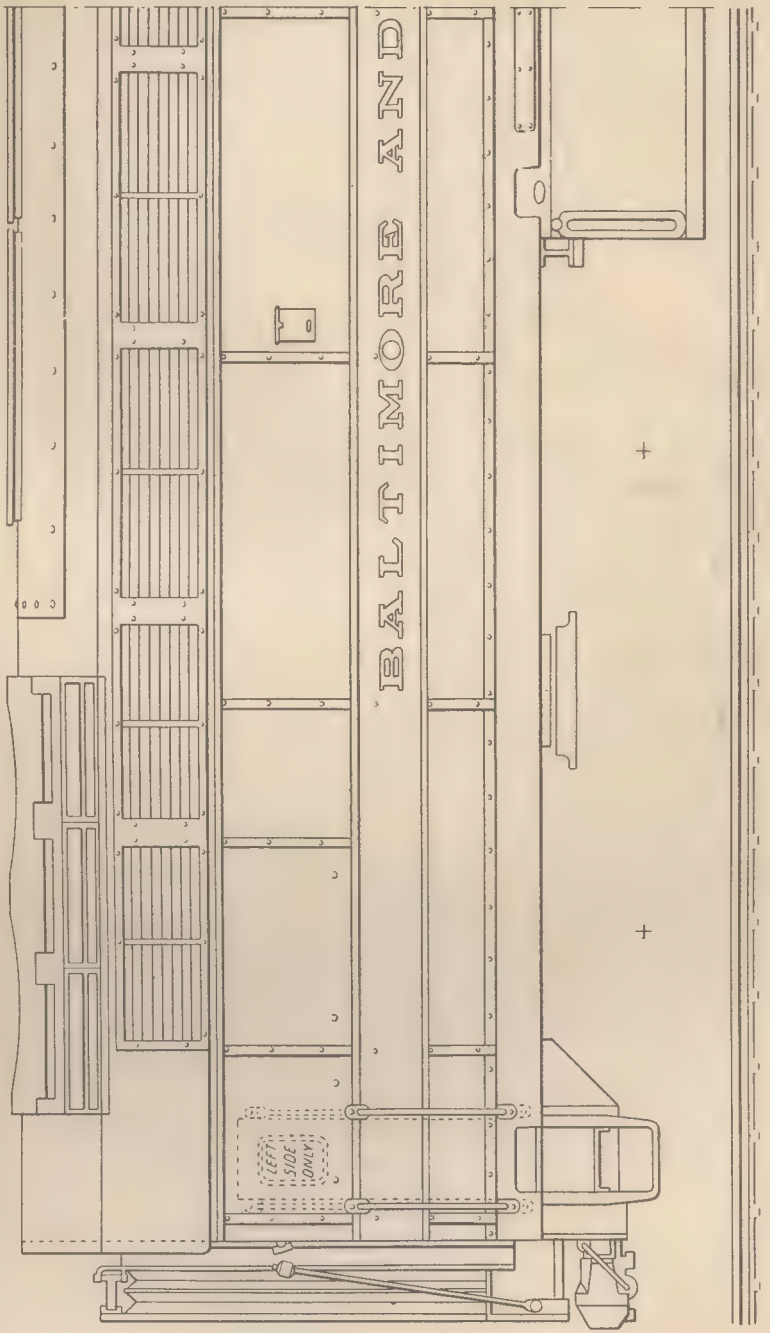
OHIO


BALTIMORE AND
LEFT SIDE ONLY!
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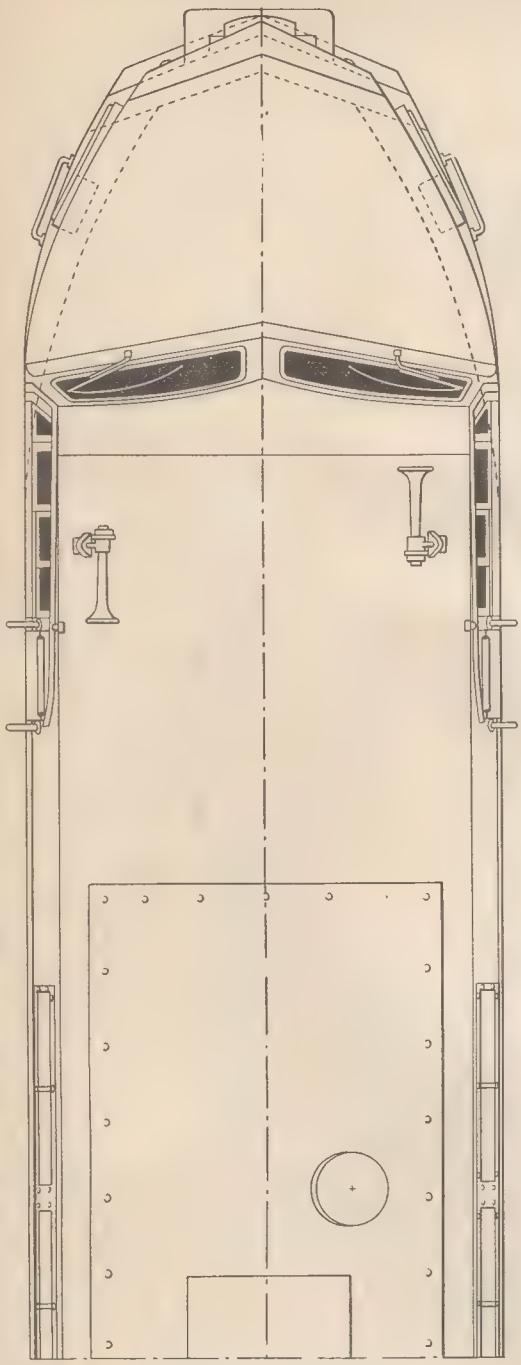
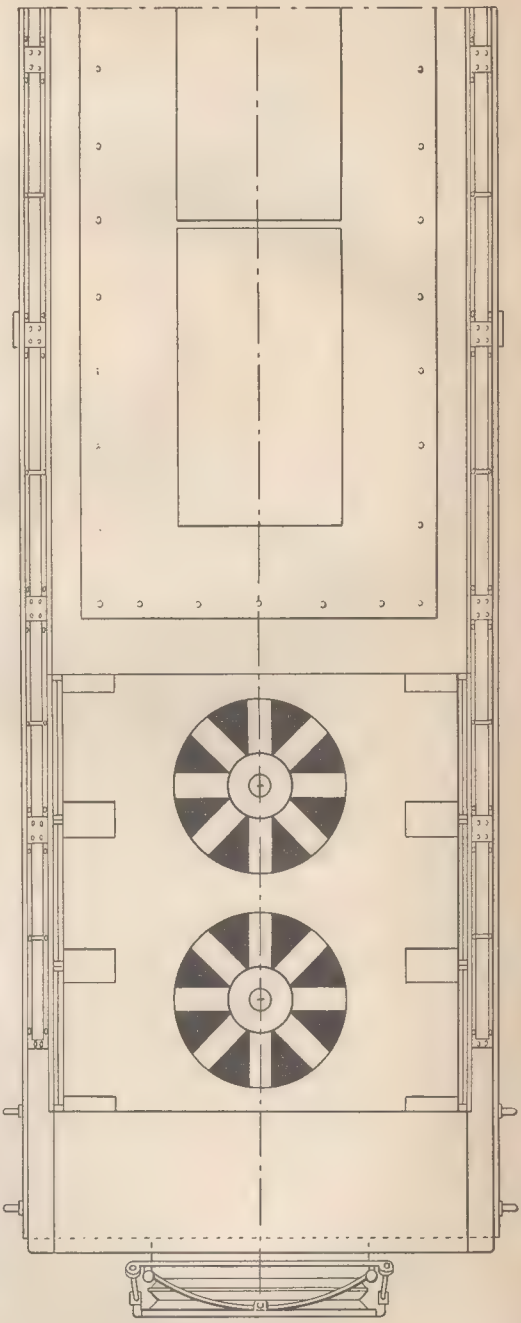
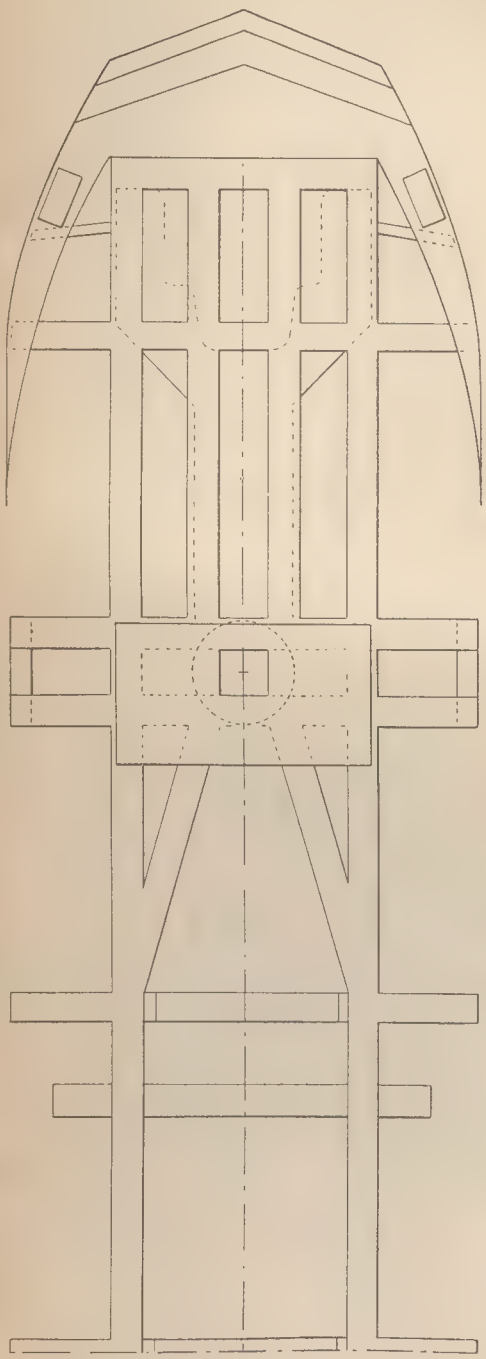
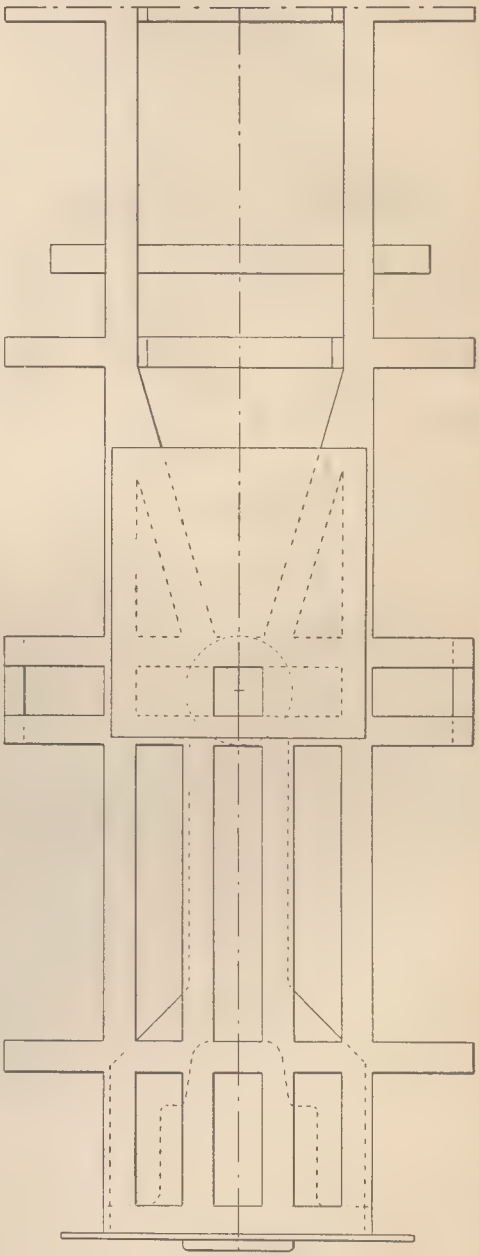




a certain amount of resilience. In a later article I will give you a step by step description of such a project. It is one which also adapts itself to such repetitious jobs as shaping car interior fittings, dummy truck frames, animated figures and a host of other model railroad fittings not subjected to heavy wear.





See front and rear-end plans, page 132

RAIL MEALS TO COST MORE
THE cost of most train meals will go up on Monday. Three - course lunches and dinners will be 1s 6d each, instead of 1s
MOON

Moon, London Daily Mirror

BRITISH HUMOR. How one London newspaper cartoonist (a counterpart of our Carl Fallberg we'd say) reacted to the rising cost of railway meals in Great Britain

On the Spot

Our Readers Talk It Over With the Editorial Crew

AMAZING is the word. This department has been instrumental in reuniting a number of old friends and relatives who had been separated for years. One such reunion was between the father and an uncle of Gilbert A. Lathrop, *Railroad Magazine* author. But the latest case, involving Hans F. Kutzbach and Raymond C. Buchardt, is even more surprising because both men live in Germany, thousands of miles from *Railroad's* editorial offices.

Hans and Raymond, good friends, resided in Berlin and were avid readers of this magazine. Hans has a brother-in-law, Robert E. White, 514 N. 5th St., Grand Haven, Mich., whose experiences as a Grand Trunk section foreman we have published from time to time. When Hans visited America in 1938 he called at our offices and met the editor.

Then came World War II. Berlin was bombed heavily. Hans and Raymond were driven from their wrecked homes, becom-

ing refugees. After the war, each man tried in vain to locate the other. Raymond established himself at Gottingen, Germany, worked for a while as interpreter for U.S. Railroad Operating Battalion 741, and then joined the German Federal Railroads as a technician in the Locomotive Testing Department, where he is now employed.

Renewing his subscription to *Railroad Magazine,* Raymond read with joy and amazement an item in our April '51 issue, page 132, telling how his friend Hans Kutzbach, Huebichweg 24, Bad Grund, Harz, Germany, was seeking him and Harry H. Schiller, a former Berlin painter and model railroad builder. Our *Spot* department brought the three men together again. Raymond is now living in Gottingen, at 50 Herzbergerlandstrasse.

* * *

CORRECTING a statement made by Oliver Sprout in "Bloomin' Bloomers" (June issue, page 110), Fred Foulds, 29 Bellhaven Road, Toronto 8, Canada, writes that Thomas Burr's bridge, built in 1814, could not have become "the first railroad bridge in history," because a colliery railroad bridge in County Durham, England, was built by a stone mason, Ralph Wood, as early as 1726.

"Known as the Tanfield Arch," he adds, "the English bridge spans a deep ravine through which runs a stream called Beckley Burn. It is a solid stone structure, 100 feet high, more than 100 feet long, and is still used as a highway bridge.

"It is interesting to note that an embankment 100 feet high, with a 300-foot base, has been in continual use by railroads for over 200 years. The colliery eventually turned it over to the mainline North Eastern Railway, which later became part of the London & North Eastern system. There is a curious bridge over Brustleton Highway with two arches, one above the other, over which ran the original line of the Stockton & Darlington.

FIRST RAILROAD BRIDGE. Fred Foulds refutes Oliver Sprout's statement that Thomas Burr's span was the first, says the honor goes to Ralph Wood's Tanfield Arch, *below*
Fred Foulds, Toronto

FIDDLETOWN & COPPEROPOLIS RY.

No. 51 Feeling Runs High in Fiddletown as Newly-Formed Street Railway Attempts Crossing F&C Tracks

by Carl Fallberg

LAST known active narrow-gage engine in Oregon, SP's No. 17, affectionately dubbed *Maria,* has finally gone the way of the dinosaur and the three-toed horse. For the past ten years she had been standing on a tiny section of 3-foot-gage track at Salem, pumping fuel oil, heating buildings and providing steam for her big sisters.

Maria had quite a history. Built in 1910, she ran on the old Carson & Colorado between Mound House, Nev. and Keeler, Calif When the SP bought the C&C it renamed it the Nevada & California, later abandoned it. *Maria* began serving as a steam plant at Salem. Hauled there on a flatcar, she was put to work on a 24-hour day, carrying 147 pounds of steam.

"But time and progress change all things," philosophizes Howard Bailey in the *SP Bulletin,* with the announcement that the little engine had been scrapped. "Old 17 has reached her final resting place on Memory Siding."

* * *

GOAT CHASES CROOK. A woman screamed. Members of the crew of an Illinois Central yard goat working near the 31st St. suburban station in Chicago, looking toward the depot platform, saw that a man had just grabbed the woman's purse and was running down the track. Switchman J. A. Sullivan uncoupled the goat from a string of cars. With Engr. Pat Quin at the throttle, the crew gave chase. When the thief scrambled over a wall, Quin stopped his engine. Three railroaders climbed out and found the culprit hiding under an automobile. They last saw him riding away in a police car in the custody of two bluecoats.

* * *

ONE of the strangest "special trains" in history is recalled by F. J. Whittaker of Calgary, Alta., Canada, who has just retired from 52 years of Canadian Pacific service, his last job being in the railway's Department of Natural Resources. This train ran in the early days when automobiles were a novelty and before Assiniboine became Saskatchewan province.

A rich man from the eastern U.S.A. had brought an automobile by flatcar as far as Portal, Assiniboine. He had with him flanged wheels which were fitted to the car so it could run on the rails. With a conductor and a brakeman assigned to it, the car took tourists through to Vancouver, B. C. It ran on train orders, just as official track-inspection cars do now; but in those days, of course, there were no track-inspection motor cars, and the special was quite a curiosity.

Mr. Whittaker started his rail career at Winnepeg in the old Land Department at a time when thousands of emigrants were coming up from the States via the Soo Line. Many were farmers who had sold their property in Nebraska and Iowa at $200 to $300 an acre and bought farm land in the "Last Best West" of Canada at $6 or $7 per acre.

* * *

EXPANDING rails in last summer's heat wave slowed Italian trains. At Pisa, where the mercury reached 106, traffic had to stop until fireman could shrink the steel back to size with tons of water. Fearing similar conditions elsewhere, authorities ordered all trains in northern Italy to move at reduced speed.

During the same period, the railway that crosses the Andes Mountains between Mendoza, Argentina, and Valparaiso, Chile, was blocked by huge snowdrifts for more than a month, South American seasons being the exact reverse of those north of the equator.

* * *

MODEL railroaders new at the game need a practical book written in clear, entertaining, non-technical language. Such a volume is *Toy, Tinplate and Scale Model Railroads,* by the old *maestro,* William K. Walthers, 241 E. Erie St., Milwaukee 2, Wis., with 32 pages and 60 illustrations, 75 cents. Walthers describes some operating stunts in a layout combining Lionel with O-gage scale equipment. He tells how to avoid costly mistakes in getting the most fun out of your hobby.

Ernest Sevde, Toledo, Iowa

FINALE. Paul Kouba, Milwaukee Road agent at Vining, Iowa, for almost 50 years, retired the same day the depot was closed down

PHOTO of a birdhouse with a train-shaped weathervane, which appeared in our August issue, page 141, submitted by Clarence Cawelti, was taken by a commercial photographer, Ernest Sevde, 110 W. State St., Toledo, Iowa, who has a *Railroad Magazine* file complete since December 1929. He writes: "I snapped it on a cold winter day, standing on a step-ladder, with a 4x5 Speed Graphic."

Regarding the item in our July *Spot* department on the double retirement of agent and depot at Vining, Iowa, he comments: "I was partly responsible for the initial story, as I took a picture of the station just before it was abandoned and later razed. Paul Kouba was Milwaukee Road agent there for alomst 50 years. He was retired the very day the depot ceased operation. Mr. and Mrs. Kouba had lived in the building for many years but had not occupied the living quarters for the last three."

* * *

ALTHOUGH the railroads now need more passenger traffic, they are still required to collect for the Federal Government a 15 percent tax on all passenger transportation—a measure designed originally to discourage passenger travel during World War II.

FIRST President of U.S.A. to ride a railroad train was Andrew Jackson, who traveled 13 miles on the B&O between Ellicott's Mills and Baltimore, Md., on June 6, 1833.

* * *

A NEW monthly magazine, *Railway Transportation,* has as its main interest the railways of Australia and New Zealand, reports Managing Editor F. Shennen, 56 Young St., Sydney, Australia. The first issue appeared last October. Printed on slick paper, well illustrated, 7¾ by 11 inches, with a three-colored cover, it sells at $2.75 a year, payable to an American agent: L. Merrell, 5242 Wahada Ave., St. Louis 13, Mo. It is, in a sense, the *Railway Age* of Australia and New Zealand.

* * *

CARELESS motorists who are observed disregarding safe driving rules at grade crossings are given a Baltimore & Ohio leaflet which lists the vehicle's license number and the time and place where the reckless act was noted. These safety tips are included:

Approach crossings prepared to stop.

Stop on warning of an approaching train.

Stop at every crossing having a stop sign.

When one train has passed, watch out for another.

Proceed only when it is safe to do so.

THIS IS THE COVER of the wrist-slapping leaflet which the B&O sends to motorists who give the railroad's trains some anxious grade-crossing moments

TAXLESS paradise is the Texas & Pacific community of Addis, La., near Baton Rouge. No property owner among its 500 inhabitants pays a cent of local taxes to the village for such services as garbage collection, street lighting, street paving, maintenance, etc. Neither the mayor, George E. Booksh, who is also a T&P telegrapher, or any other village official draws a salary from the community. *T&P Topics* reports that revenues come from commercial licenses and a pro rata share of the Louisiana state cigarette tax. The village is named for a former T&P motive power superintendent, J. W. Addis.

* * *

ALL but two of Chicago & Eastern Illinois' passenger trains are currently showing a profit, according to H. R. Sampson, traffic vice president, with a fighting chance to make it unanimous. Most roads list their passenger business in the red and depend upon freight to bail them out.

LOST ENGINE. For a whole week the *Mount Tom* of the Connecticut River Railroad (now Boston & Maine) was missing. Herbert Streeter, veteran B&M telegrapher, Greenfield, Mass., writes in the *B&M Magazine:*

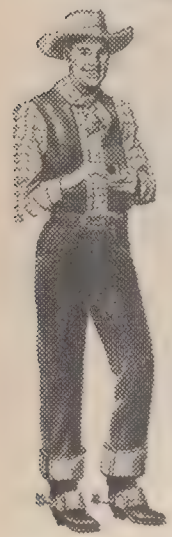
"It happened during the great blizzard of 1888. I remember it well because I was marooned the same week as operator in Northampton's old brick station. The *Mount Tom,* a wood-burning 8-wheeler with a great flaring stack, left Springfield, Mass., in a heavy storm. She disappeared from sight and from all contact with us while snow paralyzed the territory for a solid week.

"Day after day, WA at Springfield called me repeatedly for word of the *Mount Tom,* but she didn't show up at Northampton and I had no word of her. Finally, when the storm abated, a section crew found the missing engine, completely buried by snow, near Willimansett. The crew had abandoned her to save their lives."

Round-Up Pete Says: Not all the teeth put into laws are wisdom teeth—

BUT THE WISE BUYER ALWAYS PUTS HIS CHIPS ON...

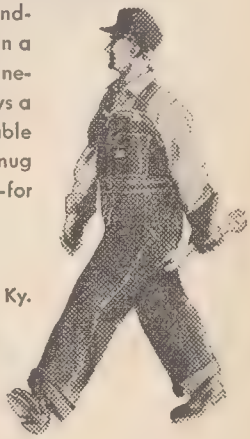
Carhartt Master Cloth Overalls



Whether you're wrestling a farm tractor or tooling a truck . . . handling the Johnson bar in the cab of a streamliner, grease monkey in a round house, cow hand at the round-up, dairyman, painter, lineman, construction worker or mechanic you'll find your work always a mite easier in easy fitting, full cut Carhartt Master Cloth washable work clothes. And for the youngsters—Carhartt offers its snug fitting, heavy weight, 11 oz. Western styled Round-Up Pants—for work or play. *For price sake . . . insist on Carhartt's.*

HAMILTON CARHARTT OVERALL CO.

Detroit 16, Mich.; Atlanta, Ga.; Dallas, Tex.; Carhartt Park, Irving, Ky.



Carhartt Round-Up Pants

UNION MADE CARHARTT'S

Carhartt Bib Overalls

TWO CHURCH BELLS of Littry-les-Mines in Normandy were damaged beyond repair by 24 hours of joyous ringing on June 8, 1944 in welcoming American troops, and a third had been wrecked by the Nazis so Chicago & Eastern Illinois president C. M. Roddewig, *left*, gave the French church, *right*, three replacements from old steam locomotives via the Rt. Rev. William E. Cousins, Chicago's Roman Catholic auxiliary bishop. The church's original bells had been supplanted temporarily by a makeshift phonograph and amplifier playing chime recordings

Chicago & Eastern Illinois

+ + +

GREECE-BOUND. The Church of Koimisis Theotokou in Hora Samos needed a bell, too, to replace one melted down by the invading Germans, as noted by Nick Manthos of Detroit in the August issue of *Railroad Magazine* after a visit to his homeland. We contacted the New York Central's news director, C. G. Muldoon, and the result was the donation of a bell to the church through Manthos, left, and his wife by Michigan Central's general manager, Karl A. Borntragger

The Detroit News

+ + +

WANTED by E. S. Rumely, 678 Covington Road, Birmingham, Mich.: Copy of booklet, *A History of the Place Names on the Chicago & North Western Railroad*, issued by C&NW about 1910

* * *

ATLANTICS "Frederick Westing's piece, 'Acme of the Atlantics,' which you published some time ago, disappointed me because I had expected him to cover the Milwaukee Road's Class A engines," protests James A. Neubauer, 3320 N. Sacramento Ave., Chicago 18, Ill. "A comment on his article in August *Spot* department, page 121, said two Class As were still pulling the *North Woods Hiawathas*, along with two streamlined *Baltics*. But Class A Engines 1, 3 and 4 have been scrapped, while No. 2, idle for some time, is doomed to the blow torch. So are the *Baltics*, now stored in Chicago, Milwaukee and Minneapolis."

* * *

LIGHTNING SLINGER. "I am close to my 50th year as a railroad telegrapher and station agent," writes F. T. Gustafson, Box 163, Kimball, S. D., "having started as a night operator in 1902 at $35 per month. The *bug*, as you know, is the vibrating type of machine, the Mecograph. I was one of the first ops to use it. I worked with a man at Wichita, Kan., who was trying out the Yetman sending machine, somewhat like a typewriter. For some reason unknown to me, it did not become popular or remain in use."

SAFETY championship for track gangs is claimed by the Louisville & Nashville outfit of nine men headed by Section Foreman Frank Culps at Tanner, Ala. This gang hasn't had an injury since January 1, 1907, which is as far back as the records go. One man, A. Cook, has been with the gang all that time.

* * *

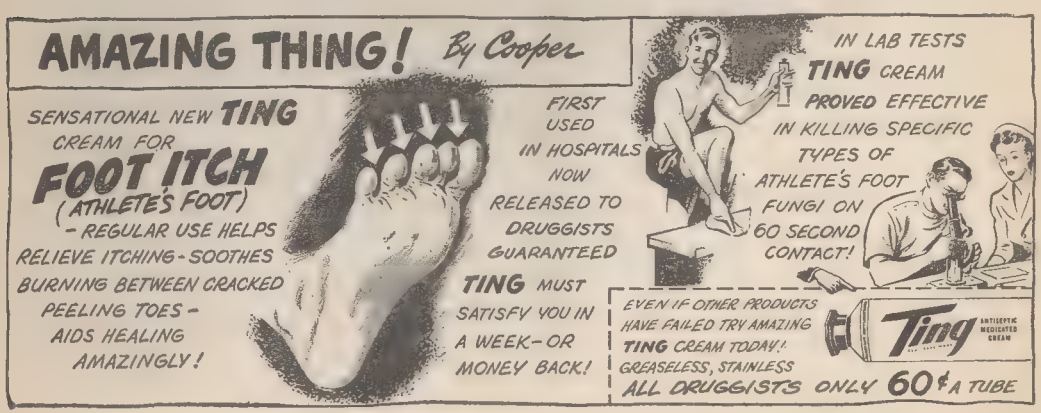
FASTER FREIGHT. Seattle moved a full day nearer New York and Chicago by rail with the recent announcement of the Great Northern, the Northern Pacific and the Milwuakee Road that they would provide fifth-morning (instead of sixth-morning) delivery on shipments between St. Paul and Seattle.

* * *

TELEVISION may be used by railroads at some future date to analyze yard operations quickly. This is predicted by W. W. Pulham, D&RGW superintendent of communications, in the *Rio Grande Green Light*. Pulham believes this could be done by installing a TV camera on a yard tower, enabling the yardmaster to see the spotting of all cars and then issuing orders via radio or loudspeaker from his desk in the yard office.

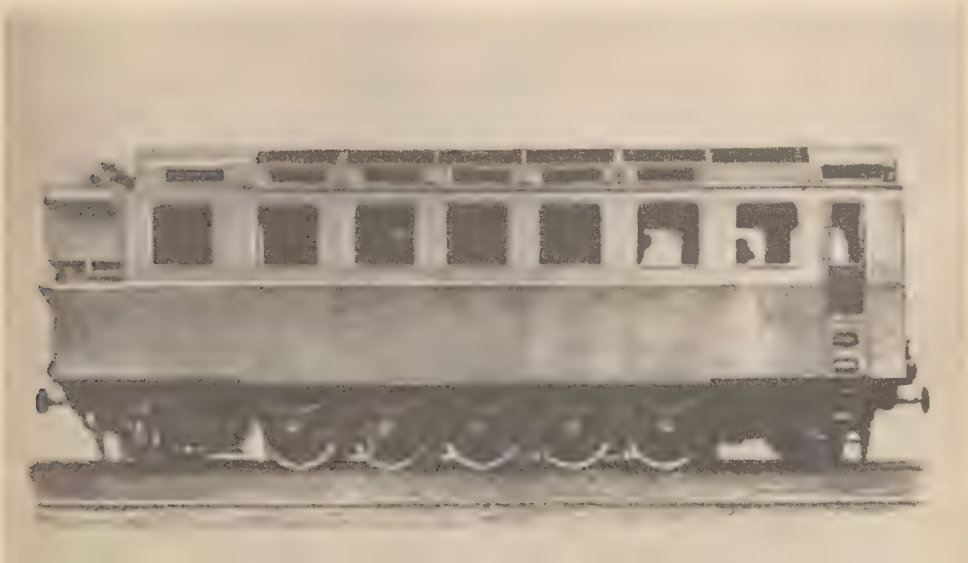
* * *

DEATH took its longest vacation in the history of Southern Pacific safety records—five months less three days with no employe fatality until a Coast Division brakeman died recently at work.


AMAZING THING! By Cooper
SENSATIONAL NEW TING CREAM FOR FOOT ITCH (ATHLETE'S FOOT)
- REGULAR USE HELPS RELIEVE ITCHING - SOOTHES BURNING BETWEEN CRACKED PEELING TOES - AIDS HEALING AMAZINGLY!
FIRST USED IN HOSPITALS NOW RELEASED TO DRUGGISTS GUARANTEED
TING MUST SATISFY YOU IN A WEEK - OR MONEY BACK!
IN LAB TESTS TING CREAM PROVED EFFECTIVE IN KILLING SPECIFIC TYPES OF ATHLETE'S FOOT FUNGI ON 60 SECOND CONTACT!
EVEN IF OTHER PRODUCTS HAVE FAILED TRY AMAZING TING CREAM TODAY! GREASELESS, STAINLESS
ALL DRUGGISTS ONLY 60¢ A TUBE
Ting

Canadian Pacific

AT LAST. For college thesis some years ago N. R. Crump, now a Canadian Pacific vice-president, often turned to the old reports of Dr. George Vladimir Lomonsoff, designer and builder of Russia's first diesel-electric locomotive, *below*. They finally met recently when Crump, *right*, heard that Dr. Lomonsoff, *left*, is living in Montreal



"EAST is East and West is West"—but sometimes the twain shall meet. A college thesis brought about such a meeting between Dr. George Vladimir Lomonsoff, Russian mechanical engineer who is credited with having designed and built Russia's first diesel-electric locomotive, and N. R. Crump, Canadian Pacific vice-president.

Back in 1928, when Crump was studying for a B.S. degree at Purdue University, Lafayette, Ind., he had to write a thesis on "Internal Combustion Engines in the Railroad Field." He turned to the reports of Lomonosoff, who had designed a diesel locomotive as early as 1909 and had one in operation in 1923. Later, while Crump was CPR locomotive foreman at Moose Jaw, Sask., and working on a thesis for another degree, he again consulted the works of Lomonosoff.

Until recently the two men had never met. Then the CPR official learned through Dr. Lomonosoff's son, who is a resident engineer with the Montreal Locomotive works, that the Russian scientist was living quietly in Montreal, and a meeting was arranged. Dr. Lomonsoff regrets that little information is available on the recent performances of the Russian diesels he fathered, because of the Soviet Government's reticence to allow technical figures to escape the Iron Curtain.

* * *

BROWNIE, B&O raildog, cut a foot badly by stepping on a bottle that someone had carelessly thrown outside the Mt. Clare Shops. A cinder dick, Edward C. Townsen, assisted by a member of the B&O Fire Department, Bill Schlotthober, tried in vain to stop the bleeding. He had to make three calls before he could get a veterinarian. Two blood transfusions were needed.

Brownie has been the mascot at Mt. Clare Shops for ten years. To say he is popular would be an understatement. When word got around that he'd have to stay in the hospital for ten days, shop workers, supervisors and railroad bulls dug into their wallets to pay for his care.

SANTA FE'S *Super Chief* is featured in a new colored photoplay, "Three for Bedroom C," starring Gloria Swanson and James Warren. Aside from scenes at Chicago's Dearborn Station, Albuquerque and Pasadena, all action takes place aboard the *Super Chief*. Based on a novel by Goddard Liegerson, the film was produced by Alperson-Bren.

The studio rented from the railway a diesel-powered passenger train with four of the latest type Pullman cars, a diner and a dome car. The rolling stock was completely dismantled at Santa Fe's 8th St. coach yards in Los Angeles, transported to the studio and there re-assembled. Thousands of items, carefully numbered, were removed from the cars, catalogued, and put back into place on the movie lot.

* * *

THE 999, which set a world speed record on her first run, and other New York Central equipment, scale models, and a Memory Lane rail exhibit were assembled at the Kingston, N.Y., depot for the city's tercentenary and a Central rail-fan trip from New York City. History records that before Washington, D.C. existed, when Congress was considering what city should become the national capitol, Kingston was the first to bid for that honor.

The fantrip was sponsored by the Railroad Enthusiasts, the Railway & Locomotive Historical Society, the Railroadians of America, the National Railway Historical Society, the Kingston Model Railroad Society, and Kingston's Chamber of Commerce.

* * *

TOP HATS, once commonly worn by stationmasters on British railways while greeting members of the royal family and other celebrities, are fast becoming passé, except at the larger stations, reports I. Kirkham, 206 Furlong Road, Tunstall, Stoke-on-Trent, England. A peaked cap with gold braid is gradually replacing the stationmaster's long-famed topper.

Donald Sims, Los Angeles

NOT HOYLE. The Book of Rules would frown upon this practice, but there's nothing like riding the tender on a hot summer day. The scene is near Liberty, Texas on the Southern Pacific's main line between Houston and New Orleans

TWO roads, the Jersey Central and the New York & Long Branch (PRR), which had been operating since 1948 on an order temporarily permitting a fare increase, have been ordered by New Jersey's State Supreme Court to revert to their 1948 fare schedule. The court upheld the Public Utilities Commission in denying a plea for a rise in intrastate commutation fare, on the ground that the roads had not proved its necessity.

LUCIUS BEEBE and Charles Clegg, railroad historians, have revived Nevada's first newspaper, *Territorial Enterprise,* long abandoned, on which Mark Twain first won fame as a humorist. It is now being published once a week in the Enterprise Building, Virginia City, Nev., at 15 cents a copy, $5 a year's subscription. Among its nationally known contributors is Stewart Holbrook, author of *The Story of American Railroads.*

A CHECKING FEE for traveler's personal luggage, advanced by most of the railroads in eastern U.S.A., has been staved off temporarily by the ICC, in answer to a protest from the Georgia Public Service Commission. As we go to press, public hearings on the subject are being held in Atlanta.

* * *

A LONG ISLAND train failed to make a scheduled stop at Woodside the other day, apparently because an extra engineer replacing a sick man didn't know he was supposed to stop there. Result: about 50 passengers were taken into Penn Station, New York, and given free rides back to Woodside.

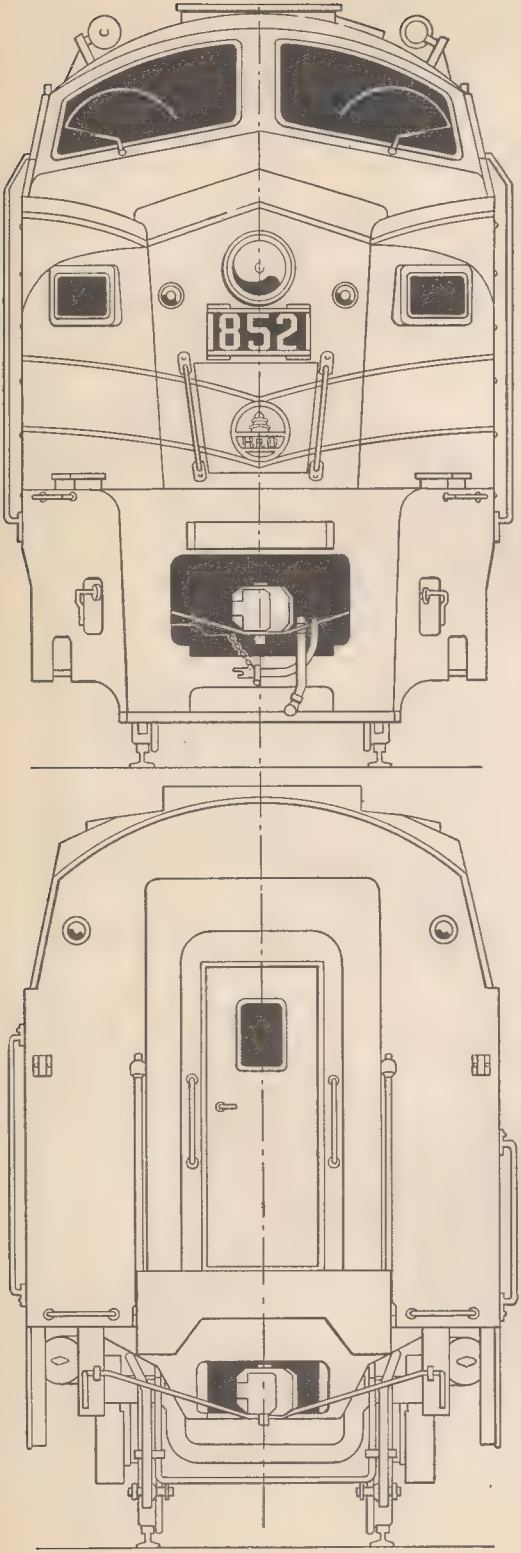
PERSONALITIES. No hospital bill was presented to Paul Koebel, C&O assistant superintendent, Columbus, O., or his wife, for the recent birth of their seventh child, Cornelia, at St. Ann's Hospital in Columbus. It's a hospital rule that seventh babies are "on the house."

Father-son combinations in train and engine crews are not uncommon; but Rock Island Engr. Charles W. Jenkins of Pratt, Kan., is in a class by himself. His fireman, Ferrill L. Heiling, is his grandson.

One of the happiest men on earth is a Boston & Maine passenger conductor, Charles Plastridge of Hampton, N. H. His son Paul had a rare disease. Plastridge held two jobs at the same time, working nights as a policeman, in a desperate effort

New York Central

NAME TRAINS had their forerunners in name locomotives. The two handsome *American* types, *right* and *below*, were respectively *Ruby* and *Stag Hound*. Both were owned by the early Michigan Central. The *Ruby* was built by Manchester in 1869 for the Grand River Valley Railroad



← Front and rear-end plans for *Build a Shark-Nose Diesel*, continued from page 117

to earn money enough to pay for hospitalizing the boy. Fellow railroaders and neighbors donated $1700 to help pay for Paul's operation, a success.

Identical twins Ralph and Roy Minton have just retired from Milwaukee Road service at age 66. Both were section foremen at Minocqua, Wis. They are said to be the only twin Shriners and 32nd degree Masons in the country.

Fifty years of selling Katy tickets at Fort Worth, Texas—that's Carey W. Leftwhich's record and he's still at it. They say he has stamped and passed out enough railroad tickets to reach halfway around the globe. He's 67, lives at 2939 Timberline Drive, and recalls the days when buying a ticket and riding a train was a big adventure into the unknown.

A two-year-old girl wandered onto the joint SP-Santa Fe track at Tehachapi, Calif., and right into the path of an oncoming Santa Fe passenger train. Fireman James H. Rolls, in the engine cab of a SP freight on a siding, saw her danger. He slid down the side ladder of his engine and raced almost 60 feet, snatching the child from almost certain death by a split second.

Two other rail heroes are Edward Duffy, an Erie painter, who saved two boys from drowning in the Erie's marine yard at Jersey City, N. J., and Joseph Jurusik, an Erie dock builder, who maneuvered his work boat to a position where he could bring Duffy and the youths to safety.

* * *

LONGEST stoppage of traffic in Norfolk & Western history began September 1, 1903. James A. Buchanan, now a retired N&W hogger of Norton, Va., recalls it vividly. He was then a section gang water-boy. A coal vein had caught fire in Craigen Tunnel west of St. Paul, Va. The mason crew and two extra crews blocked off the bore at both ends in order to flood it and quench the fire. It was 39 days before repairs were finished.

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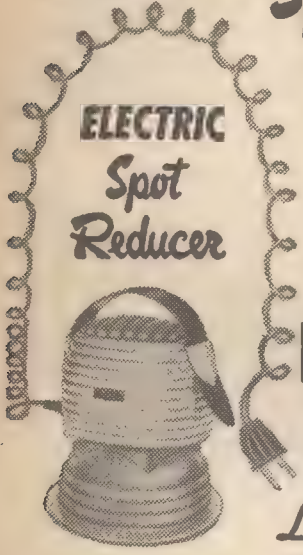

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AUSTRALIAN subscriber A. Powell, 35 Ada St., Waratal, New South Wales, writes: "Being very interested in railways, it is natural that I like *Railroad Magazine,* especially *Light of the Lantern, On the Spot,* the locomotive rosters, the Fiddletown & Copperopolis cartoons, Joe Easley's 'Not on the Wheel Report,' fact articles dealing with large motive power and general operations on major railroads. Least of all I like electric lines. Would like to see more pictures and data on steam power.

"Much of Australia's locomotives and rolling stock is obsolete, largely a legacy of the Depression and World War II. Our post-war boom has resulted in a shortage of equipment, but rehabilitation is well under way. The majority of our new locomotives are coming from England; others are on order from Baldwin-Lima-Hamilton, and Montreal; still others are being built locally.

"Australia has no oil of its own but imports all it uses, which has an unfavorable effect on diesel power, whereas our coal reserves are high, especially in New South Wales and Queensland. This situation, coupled with steep grades and heavy traffic, has brought the decision to electrify main lines radiating from Sydney. I am a draftsman employed at a steel plant which, incidentally, has a number of American (Porter) steam locos in service. My reading of *Railroad Magazine* and other journals makes me admire your country. I want to visit the States to see your railroads and heavy industry."

* * *

AIR-CONDITIONING units based on the same principle as those used on railroad trains are now being built by General Motors for use in automobiles.

Another new device in a rival transportation field, the "electronic brain," has been put into service by American Airlines at New York's La Guardia Airport. Known as a Magnetonic Reservisor, it keeps inventories on all seats sold on each flight for ten days ahead. Maybe this is

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an idea for some big metropolitan railroad ticket office to adopt. Instead of phoning a reservation room and waiting while someone checks a big board showing what seats are vacant on what flights, the ticket seller punches a few buttons. He gets a green light if the seat is available and an amber one if it's not. Then he can write your ticket or try another flight.

* * *

RUN OVER by a Southern Pacific train, two girl cousins, Frankie Evans, 16 and Velda Franks, 15, are alive and unhurt today because they laid down between the rails and let the train roll above them. They had been fishing from a drawbridge in Dickerson Bayou near Houston, Texas, when they spied the 72-car freight approaching. Robert Blundale, a boy fishing on the same bridge, swung over the side and held onto the bridge with both hands until the danger was over.

The train stopped after 14 cars and the locomotive had passed over the frightened girls, and the trainmen pulled them out from under the cars. Frankie and Velda learned afterward that their ordeal had been in vain. If they had jumped into the water they would have found it was only four feet deep. Velda blushed when the trainmen gathered around her. The engine pilot had ripped open the seat of her jeans.

* * *

STEAM is still king on the Norfolk & Western. The road's Roanoke shops have built or modernized 100 heavy-freight Class Y *Mallets* since September, 1936. The hundredth, No. 2200, was displayed in the recent biennial Coal Show at Bluefield, W. Va. Streamlined N&W passenger engines have chime whistles; all other N&W engines have single-toned whistles. The N&W owns 143 modern steam freight engines equipped with roller bearings.

The car *Pelican* has the longest of all N&W Pullman-car runs: 1452.9 miles each way between New York City and Shreveport, La., on trains 41 and 42.

TP&W In the 103 years since its founding, Illinois' tiny (239 miles) Toledo, Peoria & Western has made news, most of it bad, reports *Time* magazine.

Long known by such names as the "Tired, Poor & Weary," the TP&W was twice thrown into receivership, three times sold at auction, and has to its debit one of the nation's worst railroad disasters (Chatsworth, Ill., 81 killed.) After World War II, a long and bitter strike resulted in the shotgun killing of two strikers. In 1947, TP&W's anti-union President George P. McNear, Jr., was himself killed by a shotgun blast in a still unsolved murder.

But last April, TP&W's President John Russel Coulter, 52, who took over soon after McNear's death, reported some good news—about the best in the little

C. T. Steeb, Marysville, Calif.

ITINERARY ITEM. When you're in the Union Pacific depot park at Las Vegas, Nevada, look east on Fremont Street at a railroad-inspired hotel marquee

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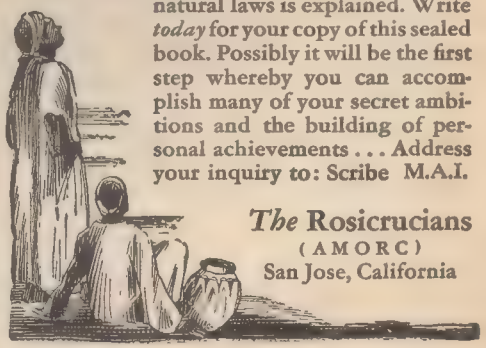

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railroad's unhappy career. From a $3,600,000 deficit four years ago, he pulled TP&W's net up to $742,000 in 1951; paid out $825,000 in dividends and more than $2 million in income and inheritance taxes.

At the news, McNear estate executors decided their job was done. They voted to turn over the railroad to estate trustees, and ask the ICC for permission to split TP&W's fifty shares of stock outstanding, now 82 percent owned by the McNear estate, 1600 to 1.

When Russ Coulter became president, the TP&W not only had grass over the rails but, thanks to the spring floods, water as well. Headquarters was a rented office in Peoria's dingy Union Depot; customers were practically non-existent. Equipment was run down and morale was low.

* * *

FREE. You may get a new 31-page booklet, *Shakespeare's Country,* by Maxwell Fraser, by writing British Railways, 9 Rockefeller Plaza, New York City. Profusely illustrated with photos of the many famous buildings and monuments in or near Stratford-on-Avon, the text describes the historical background of each. Incidentally, Stratford has no hall for variety shows, but local residents have asked the town leaders to build one. Seems they get fed up on Shakespeare.

* * *

BOASTING that it now has the world's largest train-communication system, the Pennsylvania Railroad proudly points to its nearly 1300 trainphone units in service on trains and towers along about 2000 miles of line between the Atlantic coast and Chicago and St. Louis. It operates two-way phones on 916 locomotives, 230 cabooses (the publicity department calls 'em "freight train cabin cars") and 122 wayside control towers, not to mention the 25 walkie-talkie units used by crew members while away from their trains. This great network, costing more than $9,000,000, is being expanded.

Reader's Choice Coupon

Stories, features and departments I liked best in the November issue are:

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3. .....
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LAST STOP is the Reader's Choice Coupon, above, which guides your editorial crew in selecting material for future issues of *Railroad Magazine*. Some readers use the coupon. Others prefer not to clip the magazine; they send home-made coupons, postcards or letters. Regardless of how votes are given, all count the same. Results of balloting on the September issue show as follows:

1. The Ely Route, *Wagner*
2. Houston Union Station, *Sims*
3. The Fort Dodge Juice Line, *Maguire*
4. On the Spot
5. Relief Agent, *Morrison*
6. Carbarn Comment, *Maguire*
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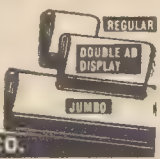

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Railroad Hobby Club

RAILROAD Hobby Club is the same department that has been devoted to collectors of engine pictures, railroad memorabilia and to model hobbyists since 1930. We invite the written comments of veteran hobbyists who wish to give the benefit of their experiences to those who are new at the game. If your writeup meets our editorial requirements it will be published in this department.

We would like to make Railroad Camera Club, which you will find starting on page 6 in this issue, into a department serving those interested or actively engaged in making railroad pictures, movies as well as stills.

ITEMS sent to the *Switch List, Model Trading Post* and *Flagstops* are published free, in good faith, but without guarantee. Write plainly and keep 'em short. Print name and complete address.

Because of time needed to edit, print and distribute this magazine, all material should reach the Editor nine weeks before publication date. Redball handling is given to items we get the first week of each month, if accompanied by latest Reader's Choice Coupon (clipped from page 139 or home-made).

Use these abbreviations: *photo*, photograph; *cond.*, condition; *ea.*, each; *elec.*, electric; *env.*, envelope; *eqpmt.*, equipment; *esp.*, especially; *info.*, information; *n.g.*, narrow-gage; *negs.*, negatives; *p.c.*, postcard; *pref.*, preferably; *tr.*, train.

Do not use the term *pix* interchangeably for photos and drawings. Specify *photo* or *drawing*.

The term *tts.* refers to public timetables, unless preceded by emp., when it means employe's (operating) timetables.

(R) indicates desire to buy, swap or sell back issues of *Railroad Magazine* or its predecessors, *Railroad Man's Magazine* or *Railroad Stories*. (Specify condition of each copy.)

(*) indicates juicefan appeal.

SWITCH LIST

HARRY B. ADAMS, 134 Everit St., New Haven, Conn. will sell July '50 *Off. Guide*, perf. cond. $3. p.p.; *Held for Orders* by F. Spearman, RR stories published in 1900, $2.50 p.p.; has good to excell. size 120, 120 reflex negs. only New Haven 794, 3607, 3011, 74, 3246 1396, 812, 3419, 986, 3432, 3612, 1387; B&M 1559, 431, 414, 1495, 3803, 117, 2406 3235, 1551, sell or trade for negs. only.

ROGER ADEN, Golden, Ill., has spring wound Instructograph Machine, very good cond., with 1st 5 rolls of tape, $20.; incls. key and sounder and instruction book; he pays postage.

(R*) RICHARD J. ANDERSON 7431 W. Isham Ave., Chicago 31, Ill., will sell *Railroad Magazines, Trains*, size 116 negs., steam and elec.

(R) TOM BJORKMAN, 66 Surrey Lane, Tenafly, N. J., will buy Jan., Feb., Mar. '49 *Railroad Magazines*.

BRUCE BLACK, 1410 Gilbert Ave. Downers Grove, Ill., will sell or trade size 616 negs. Wants to trade size 616 negs. for same of CB&Q, Milw., Soo, NP, GN, CNW, DM&IR, other rds.

(*) JOHN J. BURNS, Jr., 35 Norris St., N. Camb. 40, Mass., wants photos of Light Interurban or City Street cars. Will buy or swap recent Boston photos. List, prices for p. c.

(*) DENNIS CAVAGNARO, 10656¾ Wilshire Blvd., Los Angeles, Calif., wants Key System Street car, Interurban Elec., NWP, Sacramento Northern, Portland Traction and Pac. Elec. Northern Div. photos; will buy or trade for PE, LATL, Key System photos.

GAYLE CHRISTEN, Box 192, Parkwater Sta., Spokane 6, Wash., will buy size 616 photos, steam locos GN, SP&S, NP. Send list. Answers all mail.

(*) EARL CLARK, 2108 Howell St. Covington, Ky., has new list rare, modern trolley photos, 5c ea.; sells, trades negs.; wants photo lists.

C. J. CLARY, 1504 Salisbury Ave., Spencer, N. C., will sell to highest offer tts., emp. tts., many Southern rds. also *Trains* mag. '43 to date, many other RR books. List for stamp.

*) RALPH COOPER 2632 Troost Ave., Kansas City 8, Mo., wants photos QO&KC RR, KCCC&StJ elec. Will pay cash; will trade for Chicago sta. tts.

DAVID L. DIEHL, 1426 High St., Bethlehem, Pa., wants size 120, 620, or 116, 616 negs. Rdg. 4-6-2, 109, 112, 123, 132, 133; also negs. Rdg. 1600s, 2000s, 1800s. State price.

(R) DONALD DIETRICH, 222 W. Randolph St., Milwaukee 12, Wis., wants to buy *Railroad Magazines* Feb., Apr., Aug. '50, good cond.; also photos CNJ&M, Speedrail.

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H. C. ELDRIDGE, 327 Tioga St., Trenton, N. J., will pay *ten dollars* ea. for photos of PCC&St. Louis 0-4-0, 29 or Penn Lines 0-4-0, 8343 or 18343, Cleveland, Akron & Columbus RR 4-6-0, 68, 968 or Penn Lines 4-6-0, 15968, PCC&StL 2-8-0 Nos. 511, 512 or Penn Lines 2-8-0, 8343; also Little Miami RR Nos. 205, 215, 224, 234, 235.

(*) FRANK FAIRBANKS, 827 Nott St., Schenectady 8, N. Y., will sell or trade elec., steam RR material; will sell or trade color photos or Kodachrome slides of elec., steam RRs; will sell maps Rys. in U. S. in 1853; *Model Builder*, most issues '40 to '47. Send stamped env. for list.

GENE FALADA, 2216 9th Ave., North Riverside, Ill., can obtain negs. IC, CNW, CB&Q, CMStP&P, other rds. nearby; will trade or buy. Will trade negs. for negs., negs. for photos or photos for photos, all rds. Answers all mail

(*) RALPH FORTY SK3, 12th Div., USS Nereus AS-17, c/o F.P.O., San Francisco, Calif., would like to buy size 116, 616 juice negs. or will trade 620 negs. SDERy cars at scrap yard in San Diego.

(R) E. H. FREY, St. Thomas, Pa., will trade *Railroad Magazines* for old RR kerosene lanterns.

RICHARD D. FULLERTON, 34 South Quentin Ave., Dayton 3, O., has canceled stock ctfs. of *The New England Street Ry. Co.* 10c plus stamped env. ea. or will trade for like item. Also wants copy of *Poor's Manual* 1898 to 1902.

RICHARD H. GANGER, 92 Roswell Ave., Buffalo 10, N. Y., wants still shots no larger than p.c. size, NYC, Milw., C&O, CP, MdeM 4-6-4s; also prints NKP, W&LE, D&TSL, steam Diesel; state your railroadiana.

F. E. GILLASPIE, 1813 Kenneth St., Modesto, Calif., wants info. as to where to obtain some pictures of the old Union RR sta. at Rhyolite, Nev. and some of the 3 RRs which ran out of Rhyolite, Nev. and are now all abdn.

CYRIN T. GOODWIN, 20 Thirlmere Rd., Liverpool 6, England, will exch. uniform badges, buttons of British Rys. for same of American and other Rys.; also emp. tts.. rulebooks.

JOHN C. HARPER, 68 Kerr St., N. Oakville, Ont., Canada, wants to trade or buy pictures and negs. CN, CP, GN, IC, esp. 4-6-2s 2-8-2s.

J. W. HIM III, 3928 Prylania St., New Orleans, La., will pay 10c ea. RR photo, desires mostly engs.

HERBERT HOLMES, 22 Leopold St., Derby, Derbyshire England, desires to corres. and exch. photos steam only with fans in U. S., Australia, Eire, N. Ireland. Answers all mail.

HARRY A. JANSEN, 401 East 142nd St., Bronx 54, N. Y., will buy loco photos, all lines, is starting collec.

C. H. JOHNSTON, Jr., Conshohocken 12, Pa. is breaking up collec. railroadiana, photos, builders plates, eng. numbers, headlights, etc. Wants HQ, TT or cash.

ROBT. JOHNSON, 164 S. Crest Rd., Chattanooga 4, Tenn. wants any available info., books, photos, negs., builders' catalogs, mags. on old American and foreign steam traction engs., threshing eqpmt., aerial tram and cableways, inclines, steam engs., stationery; esp. wants

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(*) CHARLES S. JONES, 2920 W. Master St., Philadelphia 21, Pa., offers free mail auction list 2 of elec. ry. tts., maps, negs., photos, souvenirs, etc.; many rare items.

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A. LEA, 131 Love St., Wis. Rapids, Wis., wants 4x5 film pack Press camera; 2½x4¼ Premo film Pack camera.

(R) EDWIN F. LEGAWIEC, 1024 East 19th St., Paterson 3, N. J., will sell compl. or in part to highest bidder *Railroad Magazine* Sept. '47; Feb. '48; Dec. '51; *Trains* Aug. '48; Nov. '51 exc. Feb., Sept. '49; Jan. June, Aug., Dec. '50.

(*) J. T. LIDDLE, Jr., 228 Lincoln Ave., Elizabeth, N. J., will sell many LVT prints; has photos all phases current operations, many past operations, esp. Easton, Phila. Divs. Send 10c for list, sample.

(*) ROBT. MAHAR, 9 Central St., Westfield, Mass. wants to buy good quality size 116, 616 or larger negs. street car and interurban eqpmt., operating and esp. abdn. in U. S., Canada; also wants to buy collec. elec. Ry. tts., route maps, old elec. Ry. books, mags. any other historical elec. Ry. material.

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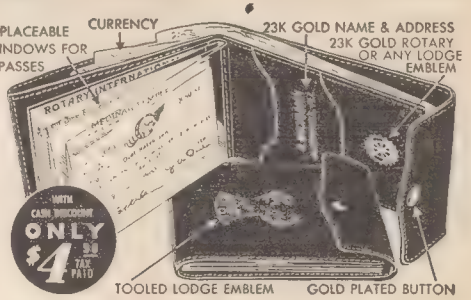

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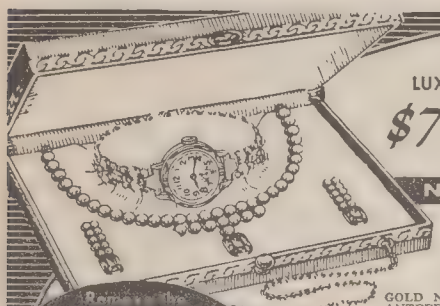

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(R) WM. H. O'NEILL, 232 Vine St., Honesdale, Pa., will sell *Railroad Magazine* May, Sept. '40, Aug. '41 Oct. '42, Feb., Apr., Oct., Nov., Dec. '44, all '45, '46 exc. Mar., '47, '48 to '51; 22 *Model Crafts*. '37 to '40; 10 *Pop. Science*, unclipped excell. cond. Ship ex. collec.; make offer.

(R) MALCOLM J. ORR, Box 32, Spofford, Tex., will buy any *Railroad Magazines* '29 to '33. State price.

(*) SY REICH, 92 St. Marks Pl., New York City 9, N. Y., will take photo New York City Transit System, Long Island RR, Staten Island Rapid Transit, B&O PRR, NYC, NYNH&H, Newark City Subway, H&M tubes on request. State your price.

F. E. REIFSCHNEIDER, Box 774 Orlando, Fla., offers new free list of trolley history, photo books, 5 books just out.

C. C. ROBERTS, Rt. 2 Ozark, Mo., will trade Frisco Ry. emp. timecards, tr. ords. for those of other rds.

(R) J. A. SCHNEIDER, 2701 Valentine Ave., New York 58, N. Y., will sell or trade *Railroad Magazines* '51 exc. June; also HO, *Model Trains* '51, exc. Jan.; all good cond., unclipped with covers. Best offer takes lot. Write first; do not phone.

R. E. SEARLE 712 Johnson St., Albany 6, Calif. desires old tts. Nev., Ore., Calif. short lines. Will trade or will sell for best offer tts. Kentucky & Ind. Bridge Co. 1892, Sou. Ry. '23, A&WP '23, D&RG '12, '31, ATSF '13; Canadian Northern descriptive folder, '15, Hocking Valley '30, others. Write first.

(R) JOE SENDERAK, 2619 W. Cortez St., Chicago 22, Ill., will sell *Railroad Magazines* Mar., Sept., Oct., Nov. '37; Jan., Feb., Mar., May, July, Aug. Oct., Dec. '38; compl. yrs. '39 to '52. Also *Trains* '46 to '51 both for 20c ea. or 6 for $1. plus postage; all good cond. with cover. Tts. 5c ea., *Off. Guides* May, Sept. 51 50c ea. plus postage.

(*) CHARLES SNELLING, 3 St. Edmunds Dr., you did not compl. your address.

(*) DON SYWASSINK, Alma College, Alma Mich., wants old emp. tts. Mich. lines only, esp. elec.; also tts. elecs.; will pay good prices if in good cond. Has few emp. tts. for sale or trade.

EDWIN O. TEFS, Jr., 1164 Ninth St., Portsmouth, O., wants photos or negs. of Western Maryland 0-6-6-0 articulated Class M-1 or any other 0-6-6-0; any view or size.

WALTER H. UNRUH, 1522 Gilpin St., Denver 6, Colo., will sell Alexander's *The Pennsylvania RR* $3.50; Hubbard's *Railroad Avenue*, $1.50; Bromley's *Clear The* Tracks, $1.; Jan. '52 *Off. Guide*, $1.25; *Trains* Album of photos Nos. 1, 2, $1.25 ea.; all good cond.; entire lot $8.50.

(*) A. VON BLON, Jr., 1700 West Ave., Waco, Tex., has Katy tr. ord. reading *Watch Out for Buffalo on Track;* 60 switch keys; bonds; stocks; fare money; local card tkts.; annual passes, tts., emp. tts., size 116 photos, buttons, *Lionel* catalogs, Bills of Lading dated 1870's, Temple-Belton interurban tkts., other items. Wants tts., emp. tts., passes.

(*) R. WARD, 24 7th Ave., Passaic, N. J., will sell photos steam elec. lines U. S., Canada, 1,000 diff. lines, size 616, 620½, 620, 127, 10c ea. Has negs to trade for Calif., Canadian lines. No list; state your wants. Trades photos and negs. only. 20 assorted trolley photos, $1.80.

ROBT. L. WARD, Box 214-A, Schwenksville, Pa., wants to buy photos Rdg., Rutland, any size. Also buys old automobile license plates, any State; write first.

T. A. WATSON, 246 Bay St., Ottawa 4, Ont., Canada, will buy photos, clippings of Milk tank cars. Write first.

L. D. WEBSTER, 124 Tompkins St., Cortland, N. Y., will sell 13 PRR calendar pictures '32 to '50 or trade for boys books or tts. prior '20.

(*) VERNON A. WELKER, 3546 Daytona Ave. Cincinnati 11, O., is interested in adding letterheads of abdn. steam, elec. lines to his collec. In writing give Co. names, state price, cond.

JOHN WEIGHTMAN, Box 696, Sacramento, Calif., has one ea. RR map of the U. S. 50c ea., GN, Rock Island, UP, Burlington; encl. 3c stamp.

LORING F. WILCOX, 67 Hillcrest Rd., Reading, Mass., may have that missing tt. or travel literature for which you are looking.

MODEL TRADING POST

HARRY P. ALBRECHT, 2934 McKinley St., Philadelphia 24, Pa., wants old toy tr. catalogs, *Lionel, AF, Ives, Dorfan* or any other manufacturer prior '30; has some to trade; will buy or trade.

Railroad Hobby Club

WM. H. COX, 1146½ S. Clark Dr., Los Angeles 35, Calif., will sell or trade live steam loco 1½ in. scale 7¼ in. gage, 4-6-2 type, no boiler, cost of castings, labor, material to date, approx. $2600., sell $600. Also, ¾ in. scale live steam loco 4-6-4 type, ready to run on steam or air, no boiler, cost $1600. sell $400. Elec. loco ¼ in. scale, custom built, 4-8-4 type, 2-rail, 3-rail, new and perf. cond., cost $850., sell $350.; *Buddy L* loco, 3¼ in. gage, tender and cars; make offer.

F. A. DiSANTIS, 13 State St. Y.M.C.A., Schenectady, N. Y., wants *Buddy L* trk., or rail, switches any cond.

RICHARD KAPP, 22 Pleasant Ave., Hastings on Hudson, N. Y., wishes to sell *AF* 250 watt trans., 2 controls, almost new, excell. cond.

HARVEY ROE, 40 Lake Ave., Tarrytown, N. Y., has hard-to-get std. gage, some 0 gage parts for *Lionel* elec. loco, cars. List for stamp.

WALTER H. UNRUH, 1522 Gilpin St., Denver 6 Colo., will sell HO Lindsay Alco Diesel with dual 8-wheel drive, new, untouched kit, $25., p.p.

ROBT. WOTISKY, 102 Chartiers Ave., McKees Rocks, Pa., wants to swap *Lionel* oil derrick, very good cond. only a few weeks old.

FLAGSTOPS

NRHS has *freight service only* tour planned for Sunday, Oct. 26; a special train, hauled by steam power over Long Island RR in Kings, Queens, Nassau counties will cover the Central Ext., old Montauk Div., N. Y., Connecting RR and the Evergreen Branch. Numerous stops for photos. Estimated time approximately 5 hours. At the end of the trip anyone wishing to ride the train into Morris Park Yard to take pictures at the roundhouse will be free to do so. $3.50 incl. tax. Leaves 8:50 A.M. EST from Jamaica Sta., easy to reach via LIRR from Penn Sta. New York. Tickets should be purchased from Robert L. Presbrey, 1156 E. 38th St., Brooklyn, N. Y. Make reservations in advance.

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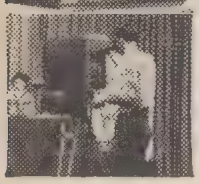

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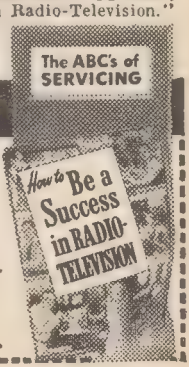

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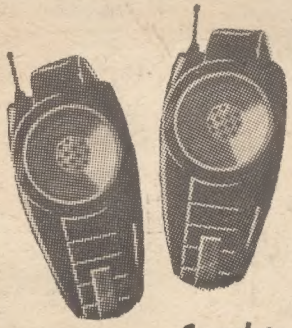

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